THE MEDICAL NEWS.

A WEEKLY JOURNAL OF MEDICAL SCIENCE.

VOL. LI. SATURDAY, OCTOBER 29, 1887. No. 18.

ORIGINAL ARTICLES.

SOME GENERAL REMARKS ON TUMORS OF THE BLADDER, BASED ON THE REPORT OF A CASE OF PAPILLOMA OF THE BLADDER IN A FEMALE,[1]

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TUMORS of the bladder have but recently received that attention which their importance demands, not that the occurrence of neoplasms in this viscus had not been previously recognized, but the imperfect methods of examination, together with insufficient modes of treatment, failed to give an opportunity for a satisfactory exposition of this subject in all directions. Owing to the recondite nature of tumors of the bladder, the diagnosis was often not clear; in many cases cystitis, which here was only a symptom, and not the disease, was undoubtedly dependent upon the presence of a tumor, and even calculi were mistaken for neoplasms. Whilst, therefore, tumors in other parts of the body have long since attracted the closest attention for the purpose of diagnosis, as well as of treatment, those of the bladder have, until little more than a decade ago, received but a passing notice. The confusion that surrounded both diagnosis and treatment also prevented a close examination of their pathological character, hence the reason why so little is found in the older works on special anatomy on tumors of the bladder, and why, even at the present time, considerable difference of opinion exists regarding their exact pathological classification, respectively their benign or malignant character.

A new impetus, however, was given to a study of this subject by the labors of two men who proposed new methods of exploring the bladder by that best of instruments, the index finger, by which new light was thrown upon a hitherto obscure subject. Gustave Simon, of Heidelberg, developed a safe and ready method of exploring the female bladder through the dilated urethral canal. Sir Henry Thompson, of London, devised a new operation, called by him external urethrotomy, by which the same object, digital exploration, was attained in the male organ. It is true both these operations had been occasionally resorted to by others before their time, for the purpose of extracting foreign bodies from these regions, but to Simon and Thompson belong the credit of first having systematically developed and practised their methods for diagnostic purposes. But not alone as a means of diagnosis have these operations proved of inestimable value, but also as a method of treatment. Hence, if they should not reveal the presence of a tumor or other foreign body, the simple dilatation of the urethra in the one, and "button-holing" the same in the other, have acted as a remedial measure in otherwise intractable cases of vesical catarrh and other affections of the bladder. It may, therefore, be said that both operations have now been universally accepted as valuable contributions to the diagnosis and treatment of a variety of disease of the bladder. The shortness and dilatability of the female uretha render Simon's operation the simpler of the two, as it is bloodless and comparatively painless, at least after repeated attempts. The length and narrowness of the male urethral canal necessarily demanded an artificial opening somewhere near the end of the long urethra, through which the finger could be introduced. For this end, as already mentioned, Sir Henry Thompson devised his external urethrotomy. Simon published his first article on a new method of making the female bladder accessible, in 1875, and Sir Henry Thompson performed his first urethrotomy followed by the removal of a vesical tumor, November 6, 1880. Since this time, diseases of the bladder have received a greater degree of study, and several valuable treatises have been written on these subjects, the most important of which are Sir Henry Thompson's lectures on the *Diseases and the Surgery of the Urinary Organs*, including his monograph on *Tumors of the Bladder*, and Winckel's work on *Diseases of the Female Urethra and Bladder*, as a part of Billroth's *Handbuch der Frauenkrankheiten*. It is to these two works that I am chiefly indebted for the statistics regarding the frequency of vesical disease, notably to the latter.

The early statistics are both meagre and faulty, due to the fact that probably many cases had not been recognized, at least their true nature not understood, owing to the absence of positive symptoms, or they had been confounded with each other as calculus with tumor, tumors with chronic cystitis, hypertrophy of the mucous membrane, etc.

A study of the statistics has been pursued in three directions: 1, the proportion of the diseases of the bladder to diseases in general, including the mortality; 2, the percentage of vesical diseases in males and females respectively, and, 3, the percentage of the various forms of vesical diseases to each other. As regards the first point, Winckel has endeavored to form some estimate from the records of three of the largest hospitals in Berlin. In nearly 42,000 cases of both sexes (25,733 men, and 16,077 women), he found 235 cases of vesical disease (187 men, and 48 women), making a percentage of 0.5, or one-half of one per cent. for all, or 0.7 per cent. for men, and 0.3 per cent. for women. Winckel, however, concludes that little

[1] Read before the Cincinnati Academy of Medicine Oct. 10, 1887.

information can be derived from a study of these statistics, except that vesical diseases are much more frequent in women than in men. The mortality list in Vienna in 1874 shows that out of 17,316 deaths only 33 men and 6 women were registered as having died from some disease of these organs, or 0.2 per cent. of the whole. This, of course, could not form a true estimate of the comparative frequency of vesical trouble, as many cases might have died from other diseases complicating disease of the bladder. Here again, however, we find a preponderance of the male over the female sex. From a report of the medical district of Musser, from 1867 to 1872, it appears that of 58,466 sick people 353 had kidney disease, 399 bladder affections, and 577 gonorrhœa, making vesical diseases more frequent than those of the kidneys, or 0.68 per cent. of the whole.

As regards the proportion of vesical disease to other affections in the same sex, and for our purpose we will simply take the female, we find again, quoting Winckel in his reports of 3775 sick females, there were 246 cases, or 6.5 per cent. of diseases of urethra and bladder, but 118 of these, or 15 per cent., occurred in the last 776 cases, showing that the percentage increased as the affections were more earnestly sought after.

The same author also selected as a basis for his statistics 2505 female cases out of a total number of 6861 autopsies collected at his request by Birch-Hirschfeld, from the records of the Dresden City Hospital in twenty-five years, from 1851 to 1876. Of these, 184, or 7 per cent., showed post-mortem evidences of urethral or vesical disease. Of these again, 45, or 21.7 per cent., had some form of tumor, 37 being cancer, besides 36 cases of vesico-vaginal fistula caused by perforating cancer. Winckel's own list of 575 female autopsies shows 144 cases of vesical disease, or 25 per cent., and 16 of these had some form of new growth, excluding tuberculosis of the bladder, of which there were 5 cases.

Although women suffer from tumors more frequently than men, it does not seem to follow that new growths in the bladder are more frequent in the former. For Guilt found in 101,411 sick cases in the three largest Vienna hospitals, 16,637 suffering from tumors; 11,140 of these were women, and 16 had tumors of the urethra, 1 fibroma, 3 papillomata, 3 polypoid growths, 1 sarcoma, and 8 carcinomata. 20 had cancer of the bladder, as against 46 men that suffered from it. In 119 cases of primary tumor in both sexes, Sperling found 41 fungoid growths (fibromata or papillomata), 19 medullary carcinomata, and 5 scirrhus (25 cancers altogether), 10 mucoid polypi, 6 myomata, 7 carcinomata, and 6 fibro-sarcomata. Of the fibromata, two-thirds occurred in males and one-third in females, and carcinomata were four times more frequent in men than in women. Rauschenbusch found 10 females affected in 22 cases of papillomata of the bladder. In his list of 20 operations for tumors of the bladder, Sir Henry Thompson records 2 women, the remaining 18 being men. The great majority of these were papillomata. Of about 50 specimens belonging to the London museums, examined by him, 43 belonged to adults and 8 to children. The sex of the former was not recorded, but of the latter, 6 were females. In his historical notes on tumors of the bladder, Thompson relates about a dozen cases, all males, from the first operation performed by Corvisart in 1639 until his own first case, in 1880.

From all these statistics we simply conclude that vesical disease occurs more frequently in men than in women. This may be owing to the frequency of disease of the prostate causing greater obstruction to the flow of urine, and the greater length and narrowness of the male urethra, which in turn increases the tendency to disease of the bladder, from retention of urine, calculi, etc. Whether benign primary tumors are more common in men is doubtful, although it seems that primary carcinoma is more frequent in the former than in the latter. Secondary carcinoma is probably more common in the female, owing to the greater frequency of primary carcinoma of the uterus and vagina, from which the disease may extend to the bladder and the urethra. It is difficult to form any estimate from statistical reports as to the comparative frequency of benign and malignant growths, on account of great discrepancy both among microscopists and clinicians regarding the essential characteristics necessary to determine their benignity or malignancy.

Whilst all authorities admit that the bladder may become subject to the development of benign tumors, some deny that the bladder ever becomes primarily the seat of malignant disease. Others, again, assume that a malignant tumor may form the case upon which fungosities may spring, which present microscopically the appearance of non-malignant growths. The greatest point of contention is the so-called "villous cancer" or villous tumor, called by the first name by those who assert its malignancy, by the latter by those who claim its benignity. Klebs, for instance, denies the occurrence of primary carcinoma in the bladder in any form. Rindfleisch says that papilloma of the bladder is sometimes also called villous cancer, but a better term would be villous tumor, because the growth has nothing to do with carcinoma, for even a superficial examination will show that it consists of nothing besides branches of villi. He admits, however, that a papilloma may develop into an epithelioma, or the two may exist together. He also mentions the observations of other authors, that the mucous membrane over a subjacent carcinoma may develop into a papilloma, but states at the same time that he has not witnessed its occurrence. According to Virchow, a papilloma is at first a simple hyperplasia caused by the irritation of a neighboring carcinoma; but afterward it may become converted into a true villous cancer, if the carcinomatous growth underneath invade the connective tissue of the papillæ. "This change," he says, "most commonly takes place in the stomach and bladder." It is a curious fact that these two organs are normally said to be devoid of papillæ. Birch-Hirschfeld says: "Occasionally the base of a papilloma undergoes cancerous infiltration, either the villi proliferating on a cancerous base, as happens in other mucous membranes, or the carcinoma develops subsequently in the groundwork of a papilloma." Ro-

kitansky, after enumerating the following neoplasms which may occur in the connective and submucous tissue—polypoid and papillary excrescence of the mucous membrane, fibroid tumor, epidermidal degeneration (cholesteatomata), lymphoid formations, and cysts—states that *primary carcinoma of the bladder is not rare*, in the form of a medullary villous cancer, which is usually situated in the trigonum or its vicinity. Very rarely this form of cancer springs from the submucous connective tissue, and extremely rare is a fibrous, carcinomatous degeneration of the walls of the bladder. Secondary deposits are common in carcinomata of the sexual organs of women. Very frequently the bladder is infected *ex contiguo* by a medullary carcinoma of the uterus, or a medullary or colloid cancer of the rectum.

From all this it may be seen that the papillæ themselves alone are no positive evidence of non-malignancy, as they may complicate cancerous growths, or form a part of them. Some confusion also seems to exist regarding the terms papilloma and villous tumor, these terms being regarded as synonymous by some whilst others make a distinction, calling a papilloma a benign growth, whilst a villous tumor is a form of cancer. As the papillomata differ among themselves, depending upon the greater or less amount of fibrous tissue and the preponderance of epithelial proliferation, it would be expedient to make a division between the two. Sir Henry Thompson has made this distinction, after having had all of his twenty cases carefully examined by competent microscopists. He ranges all tumors of the bladder under two heads, which he calls homœoplastic and heteroplastic. Homœoplastic are such tumors as consist more or less of elements identical with the normal tissues of the bladder; heteroplastic, those which consist more or less of elements never found in the tissues of the healthy bladder. To the former, then, would belong the papillomata, from their nature being homologous with the normal tissue, benign in character; to the latter carcinomata, heterogeneous and consequently malignant. Papillomata are again subdivided into two forms, the fimbriated variety, ordinarily known as the villous growth, and the fibro-papillomata, or ordinary, simple papillomata, so-called. This classification would dispose of the villous tumor, ranging it under the head of benign growths. But the same author recognizes a third variety, which he calls the "transitional type." In this form, although the base is still homologous, with the normal bladder, there are certain cells which are foreign to this structure. He states, however, "that the mere presence of papillæ on a tumor, whether met with in the simple or long fimbriated form, does not characterize a growth, because they may be met with springing from the surface of heteroplastic growths, as epithelioma or cancer. The distinguishing feature of the transitional type is the arrangement of the ground-substance and the presence of irregularly shaped cells, which do not belong to the normal tissue of the bladder on the one hand, or to distinct new-growths on the other."

From what has already been said, it may be inferred that, as a rule, homœoplastic growths are benign in character; heteroplastic, malignant; although there may be exceptions, for a dermoid growth is heteroplastic, and yet not malignant. Such a tumor has occasionally, though rarely, been observed in the bladder, either as a result of a bursting into this organ from a locality in its vicinity, as dermoid cysts of the ovary, or a primary development of the tumor in the walls of the bladder itself. In this connection it might not be uninteresting to cite the opinions of some American authors. Speaking of villous growths in the bladder, Van Buren and Keys say, "There is nothing cancerous about their structure. Their cause is unknown. They never lead to secondary cancerous deposits elsewhere. They do not spontaneously ulcerate. The lymphatic glands are not implicated. There is no characteristic cachexia. When they kill, death seems to be due partly to a loss of blood and exhaustion from pain."

Skene seems to be undecided as to the cancerous or non-cancerous character of villous tumors, for, after calling attention to the difference of opinion between the German and some English authorities on one hand, and the American authors just quoted on the other, he ranges them under the head of carcinomatous growths, stating, "not that I am satisfied that they are malignant, but for lack of positive evidence of the new idea, temporarily at least, adhere to the old one."

These preliminary remarks are induced by the history of an interesting case which I am about to report, which presents a field for study not alone to the clinician, but also to the microscopist. The obscurity of the symptoms in the beginning, the presence of physical symptoms which suddenly disappeared and left no trace of their previous existence, and the successive pathological changes which occurred in the continued growth and recurrence of the tumors after removal, prompted me, for a better understanding of the case, to trespass for a little while upon your patience in travelling over a ground on which, perhaps, many of you are more at home than myself. I will not, therefore, tax your patience any longer, and at once pass to the report of the following case:

Mrs. M. S., German, aged fifty-two years, widow, was admitted to St. Mary's Hospital, February 3, 1887. She was extremely emaciated, and her countenance bore the expression of great suffering. Her general appearance was both anæmic and cachectic. The patient, who was a lady of more than ordinary intelligence, gave me a clear and interesting history of great suffering from a chronic disease of the bladder, and, as evidence, showed me a vial containing a large number of small, fleshy bodies, varying in size from a filbert to a chestnut, which she had passed from the bladder within a short space of time. Besides these small tumors, the vial contained a fluid having the appearance of muco-pus. In reciting to me the history of her complaint, she stated she had been under the treatment of Professor Winckel, formerly of Dresden, now of Munich, who had operated upon her for tumor of the bladder, and had described her case fully in his work on *Diseases of the Female Urethra and Bladder*, and in Billroth's *Handbuch der Frauenkrankheiten*. As I

was fortunately in possession of this celebrated work, I consulted it on my arrival home, and from it I borrow the following clinical history of the case up to the time she passed out of the hands of the distinguished German gynecologist:

"*Large papilloma of the posterior wall of the bladder; rapid dilatation of the urethra by means of the finger, and extirpation of the growth; recovery of the patient.* — Mrs. M. S., aged thirty-nine years, from New York, suffered when a child from a severely itching eruption, probably urticaria. When four years of age, after eating some unripe plums, she was seized with severe pains on micturition, which disappeared in the course of several weeks, after proper medicinal treatment. In her fifteenth year she had regular periodic attacks of fever, lasting one month. Her menses first appeared in the beginning of her sixteenth year, and since that time returned regularly every twenty-six days. In 1866 she had an attack of cholera. In 1868 she was married, but just previous to this event, *she fell with the full weight of her body against a corner, receiving the blow upon the right side of her body.* At that time she feared that she had received an internal injury. The pain, which was very severe at first, soon, however, disappeared. On the 10th of May, 1869, seven months after her marriage, she was delivered of a living child without artificial means, the duration of her labor being eleven hours. The abdomen remained enlarged after this labor. In consequence of mental depression, attributed to the death of her child, she experienced for the first time, in July, 1869, *suddenly alarming weakness in the right side of the lower part of the abdomen*, and was absolutely unable to emit a loud word or walk a step. This condition of weakness was frequently repeated, and soon was accompanied by severe cramps in the whole body. Some weeks later she says she found in her urine small granules of pus, about the size of a pin-head, to which a small amount of blood was constantly adherent. A year later she was seized, upon the slightest exertion, with hot, burning stitches, proceeding from the urethra upward, and passing to the right, which caused her to cry out aloud. The abdomen grew large and very painful, but the chief pain was always situated in the lower part of the bladder and near the urethra. Appetite was enormous, sleep heavy and profound. In the beginning of the year 1872, the patient, according to her own report, first plainly felt, during micturition, a crowding of floating bodies toward the orifice of the urethra during the flow of urine; sometimes this occurred so rapidly that the bodies completely obstructed the urethra. After this a spasm of the sphincter took place, which relaxed only after drinking a large quantity of hot water and the local application of a sponge dipped in hot chamomile-tea, after which the urine was again completely voided. The following symptoms are described by the patient herself; she says: 'Soon afterward a new affliction set in. Every morning, when increased action of the bowels begins, and the gases that are formed seek an outlet, they do not escape through their natural outlet, but, like a stream of burning lava, pass from the upper right side into the bladder, where they scatter between the foreign bodies, as the smoke from an engine encircles the tops of trees. Even at that time I experienced, in the midst of the most horrid pains, the branched and tree-like growths, but was laughed at or decried as insane when I described them. About this time I discovered, in front of the cushion encircling the orifice of the urethra, a tumor highly inflamed, resembling in shape the end of a quill; I touched it with nitrate of silver, and in three or four weeks, after having previously passed a great quantity of blood and pus with the urine, the first three granulations, the size of a bean, forced their way through the urethra, causing labor-like pains. A few pieces followed the next day. I was now greatly relieved, but the pains reappeared after one month. October 23, 1872, Dr. de Moor, of New York, after a careful examination, declared my disease to be an *enlargement of the right ovary.* He asserted that the *whole ovary had already descended into the bladder.* I was painted with tincture of iodine, and, after one month, suddenly the morning pains, already described as due to the passage of wind, ceased, and have not returned since that time.'

"The patient's condition remained the same up to the time that I first saw her, in the summer of 1873, four years after the inception of the trouble. She was of medium height, had a considerable amount of gray hair, her features were pale, and bore the marks of suffering, although her nutrition was rather good. The abdomen was tense, with a considerable amount of adipose tissue, which rendered the detection of a tumor difficult. Touching the urethra and examining the vagina caused such excruciating pains that she anxiously begged to be put under the influence of chloroform, which was given her.

"To the right of the uterus, projecting somewhat above the line of the pelvic inlet, I could feel a tense, elastic, and immovable tumor, which seemed to me to proceed from the right ovary. The urine removed by the catheter was clear, containing no foreign bodies, whereas the patient had shown me an abundance of warty bodies, each about the size of a hazel-nut, filling an ordinary tumbler, which had passed from her urethra from time to time. My diagnosis, therefore, coincided with that of Dr. de Moor, that a papillary ovarian cyst had perforated the wall of the bladder, and the papillary tumors had been discharged in this manner. But as I could feel no tumor in the bladder with the catheter, and found nothing foreign in the urine, there was no cause for operative interference.

"During the following eight months gradually more fragments passed from the bladder, at one time amounting to enough to fill a 100-gramme (3-ounce) vial. Meanwhile, bloody discharges occurred, coming away in drops, and more at a time, and causing such intense pain that the patient determined to submit to any operation that would promise her a relief from trouble. Consequently, on June 10, 1874, for the purpose of closer observation, I admitted her to my clinic. She then had no fever, had a good appetite; her bowels were sluggish, but were easily moved by large injections. She was restless at night, but soon improved under small doses of tincture of opium. After copious draughts of hot drinks, the patient passed, June 11, 1048 grammes (33 ounces); June 12, 1180 grammes (37 ounces); and June 13, 1350 grammes (42 ounces), of urine, containing a mixture of pus and blood, but no solid masses.

"June 17. I had her put under chloroform, and, after having first had the urine drawn off with a catheter, carefully introduced the left index finger into the dilated orifice of the urethra and penetrated the canal in the course of two or three minutes without exerting any undue force, whereupon I could feel on the *posterior wall of the bladder, about the region of the orifice of the right ureter*, a large movable, villous, soft tumor, which could be crushed and separated into smaller pieces with the finger. After this had been done in all directions, I removed the finger and injected through the syringe about 150 grammes (5 oz.) of warm water, then introduced a Carus bivalve dilator uteri into the bladder and allowed the severed fragments to flow out through the blades in large quantities. The finger was again inserted to remove all remnants, and as the pedicle of the tumor constantly evaded the finger, I attempted to introduce a small pair of forceps

along its side. Although I succeded with some difficulty, I could not then feel the growth with the finger, and therefore had to remove the instrument again. In three or four successive attempts I succeeded in crushing off all the sensible projections on the posterior wall, and removing them from the bladder in the manner described above. Hemorrhage was moderate; the sphincter promptly closed immediately after the withdrawal of the finger or dilator, so that none of the injected fluid passed off. At the close of the operation I detected a small fissure *in the upper portion of the mucous membrane of the urethra and a small depression in the lower left border of the urethral orifice.* The patient had vomited once during the anæsthesia. This vomiting recurred several times in the following night, the next day, and the second night following. This, however, constituted the sole reaction which the patient showed; for the pulse ranged constantly between 72 and 80, the patient was wholly without fever, had but slight pain on micturition, and the urine which had in the beginning contained considerable blood, small clots and fragments, improved gradually in appearance. Warm baths were very refreshing to the patient.

"I was highly interested to find during the examination made during anæsthesia, before the operation, that the uterus was entirely healthy, normal in size and mobility, and *nothing* to be found of the tumor on the right side. It is true the bladder seemed to be depressed at the spot where the pedicle of the tumor appeared to be inserted, but no connecting passage or adherent bands could anywhere be found.

"The nature of the tumor removed corresponded exactly with the masses discharged previously by the patient. At first sight it can be recognized as a *papillary* tumor, of which the separate papillæ are somewhat distended about the size of a millet seed to a grain of barley. The papillæ consisted of lamellated and proliferated pavement epithelium on the surface, with a very delicate connective tissue ground, containing several large vessels which send branches into the papillæ. Had there been a cystoma of the ovary in this case, there would undoubtedly have been a recurrence of the growth and extension in another direction after the primary fistulous opening into the bladder had cicatrized; for I have repeatedly witnessed the perforation of such cystomata into the rectum or umbilicus after the communication outwardly had been cut off. Such was not the case in this instance. The patient has recovered entirely; she lives in my neighborhood, has presented herself two years after operation, and there is *no trace of an ovarian tumor*, nor a recurrence of papilloma of the bladder."[1]

To continue this interesting history as given by Professor Winckel, the first part of which the patient had furnished him in writing, she made to me the following oral statement. After leaving Professor Winckel she enjoyed an immunity from the disease for about eight years, but then gradually the former symptoms again set in; pain on micturition, associated with the discharge of pieces of tumor. She managed to do without treatment for a year, after which she was compelled again to seek medical advice, but received no benefit until she was finally referred again to Professor Winckel by her physicians. She revisited him; he made a thorough examination, but, to her knowledge, he removed nothing except allowing some pieces to pass away spontaneously through the dilated urethra. He at first thought of making a cystotomy, but soon abandoned this idea and recommended simply injections of a solution of salicylic acid. She continued this treatment nine months, under which she improved slightly, so that she could again move about, though with great pain. As the salicylic acid gradually lost its efficacy, she of her own accord injected a solution of nitrate of silver into the bladder for over two years—from May, 1884, to July, 1886. This in turn gave her some relief, but as her trouble finally grew steadily worse, she consulted Professor Küster, of Berlin. This gentleman at once ordered the discontinuance of the nitrate of silver and again ordered salicylic acid injections. She yielded reluctantly to his order, but failing to obtain any relief she again had recourse to injections of nitrate of silver. This time, however, they failed to give her any relief. She then resumed the injections of salicylic acid, and continued them up to shortly before her admission to the hospital. She left Europe in September, 1886, arriving in Cincinnati the same month. Her trouble gradually became worse until she became bedfast on November 2, 1886. Her condition remained unchanged, except that in Christmas week incontinence of urine set in, which continued to the time she was admitted to the hospital, February 3, 1887.

The first thing that struck me when I entered her room the next morning after her admission, was a terribly penetrating odor which pervaded the whole room. Searching for the cause I found a vesselful of thick purulent urine on the floor at the bedside, into which the urine flowed as it passed from her bladder into a rubber cloth over the bedding. Notwithstanding her miserable condition, the patient was of a somewhat cheerful temperament, thoroughly resigned to her fate. Her pulse, although weak, was regular and not rapid, her appetite good, her bowels somewhat constipated, but easily moved by injections, and her sleep good so long as the fragments in the bladder found free exit from the urethra. After ordering the necessary disinfectants, I proceeded to obtain the history as it has been given. As my interest had been aroused I proposed an examination to the patient, to which she reluctantly consented upon the condition that I would administer chloroform. Thereupon I called Dr. Jones to my assistance and he administered the anæsthetic. The examination revealed the same state of affairs as given in the history of Professor Winckel. The uterus was small but normal and perfectly movable; no ovarian complication could be found—in fact, the ovaries could not be felt. The urethra showed several lacerations in its border and was dilated, but not sufficiently to admit the index finger. I consequently introduced a bivalve urethral speculum and gradually dilated the canal. During the process a number of round bodies passed out through the blades of the instrument varying in size from a

[1] The translation of the history of this case was made from the first German edition of Winckel's work, before the English translation appeared. In Vol. X. of the Cyclopedia of Obstetrics and Gynecology, published by William Wood & Co., just issued, which is a translation from the second German edition, I find the following additional sentence: "In July, 1882, eight years after the first operation, she returned to me in trouble again. I found the entire posterior vesical wall diffusedly infiltrated with a new growth, extirpated a part, and found that there was carcinomatous degeneration. She moved away soon afterward, and I do not know whether she is still alive."

grain of corn to a hazel-nut. After the dilatation had been performed I introduced my index finger and came at once upon a large field of roundish bodies in the posterior wall of the bladder, which rapidly gave way to pressure. At this stage of the examination, however, the patient seemed to succumb to the influence of the anæsthetic, so that further exploration had to be immediately suspended and artificial respiration instituted. With some difficulty the patient was made to rally and put at once to bed, thus abruptly terminating the examination. The patient soon recovered, and owing to the discharge of a great number of fragments, expressed herself as somewhat relieved. Nevertheless she soon experienced her former difficulties, the pain becoming most intense when large pieces blocked the urethral orifice. As a disinfectant measure a solution of thymol was injected into the bladder a number of times daily by the patient herself, who had become skilled in the use of the reflex catheter. Other agents were occasionally substituted, but she declared that she obtained the greatest relief from the thymol injections, and therefore used them diligently.

During all this time there was no hæmaturia, except a slight amount at one time, every specimen of urine having been carefully inspected for the purpose of accurately settling this point. The aforesaid warty growths continued to pass out of the urethra assisted by several daily irrigations of the bladder which the patient diligently instituted. These bodies, according to the patient's description, had at first been firm and of an opaline appearance; now they gradually became darker in color and more friable, but still remained of variable size. To determine the microscopic character, several of the older specimens which the patient had brought with her were given Dr. Kebler for examination, who reported that he found no evidence of anything but papillomatous growths, with no positive proofs of malignancy. As the patient continued to discharge these bodies, several later specimens were given to Dr. French for examination, whose report will be found appended to this history.

The patient's condition remained about the same, with the exception that she gradually grew weaker, and the treatment was simply symptomatic. Nothing but stimulants were administered in the meantime, until she finally succumbed by exhaustion on April 3, 1887.

A post-mortem examination was made by Dr. French, the Pathologist of St. Mary's Hospital, on April 4th. On opening the abdominal cavity the peritoneum was found thick and adherent to the bladder, which was considerably larger than normal, with much thickened walls. The outer surface of the bladder was roughened by the inflammatory product and the walls appeared very friable. The dimensions of the organ were as follows: Length of cavity, 7¼ inches, width, 5 inches, thickness of the walls over ¾ inch, making the external measurement about 8 x 6 inches. The entire internal surface was covered with these round papillomatous bodies, varying in size from a pea to a hazel-nut. The bladder, ureters, and kidneys were filled with pus; the ureters were dilated to a size large enough to admit the finger, and the pelvis of each kidney contained a large accumulation of pus, with several small metastatic abscesses in the cortical portions. The ovaries were small and shrunken, and bore no evidence of cystic degeneration. The uterus was externally of normal appearance, but on section a number of small fibroids about ¾ of an inch in thickness were found imbedded in the walls. The lumen of the cavity was correspondingly lessened. The organs of generation showed no evidence of disease, the degenerative changes having taken place only in the urinary organs; the bladder, ureters, and kidneys. The inguinal lymphatic glands were enlarged.

Several microscopic sections were made from different parts of the specimen. The papilla-like bodies presented the same characteristics as did those examined some time before the death of the patient. The structure of all the specimens was that of a rather soft, medullary carcinoma. No other tissue could be found.

A study of the case just mentioned presents several interesting features: first the question as to the cause of the trouble; secondly, the duration; and finally, the pathological character of the tumors.

If any stress be laid upon the very beginning of the history, the bladder trouble must have begun at a very early age. The patient stated that when she was four years of age (forty-eight years before her demise) she was seized with severe pains on micturition, lasting a number of weeks before they disappeared under appropriate treatment. She attributed this to the eating of unripe plums. Perhaps no significance would have been given to this symptom, if such a serious vesical disease had not set in, yet it is not impossible that even at this early age there was disease of the bladder which was perhaps congenital. Hypertrophy of the bladder and polypoid growths have been observed in very young children and even detected at autopsies made upon newborn infants. Winckel mentions a case where two mucous polypoid growths, one the size of a pea, were found in the body of an infant born in the eighth month of gestation. Martini describes a case of dermoid tumor in a newborn child. Podrazki cites a case of J. Cooper, where a papilloma was found in a female child four years of age. Gross removed a number of mucoid polypi from a boy, and Billroth, a large fibroid tumor the size of a fist also from a boy twelve years of age. Owen describes a sarcomatous tumor in a boy who died when six years of age. According to the same author, Giraldés gives two examples of polypoid tumors; one protruded in a fungating mass through the meatus urinarius of a female infant. According to him, Burkett and others have reported similar cases. It is not impossible, therefore, that our patient had the beginning of her trouble at a very early age. It is true, the condition of the bladder at that time might have been only that of mucous hypertrophy, no foreign growths as yet existing to block up the discharge of urine, as this was the most troublesome symptom a long time afterward. Nearly twenty years ago (1868) the patient first met with an accident, a fall, to which the be-

ginning of her trouble could be unmistakably referred, but it was about three years later that a positive obstruction of the urethra could be felt, and this was preceded by the discharge of small particles of pus and blood in her urine, as early as one year after the receiving of the injury. There was evidently, therefore, an extravasation of blood into the wall of the bladder at the time the injury was received, and this gave rise to the development of the new growth. Hutchinson describes a case similar to Winckel's and mine, where a woman twenty-three years of age was suddenly seized with a severe pain while lifting a heavy weight and gradually developed the symptoms of papilloma of the bladder. The length of time elapsing between the receipt of the injury and the first obstruction may be explained by the fact that the neoplasm was not of sufficient size to cause any material obstruction to the flow of urine. In fact, the mechanical difficulty depends as much upon the situation of the growth as upon its size. Tumors upon the anterior wall and sides of the bladder are said not to offer the same degree of obstruction as those developing in the trigonum, which is the most common seat of attachment. Hence if the triangle between the orifices of the ureters and the neck of the bladder be not obstructed or detached patches be floated toward the urethral canal, the symptoms of difficult micturition caused by obstruction may be absent. Some cases have been recorded where tumors were found post-mortem in the bladder that had caused no symptoms during life.

The removal of the tumors in 1873 gave relief for a long time, and Prof. Winckel was justified in assuming that he had cured the patient when she remained free from a relapse for eight years. Then all the former symptoms reappeared and the tumors seemed to grow with increased rapidity. From this time another phase developed in the character of the neoplasm. There can be no question that from a microscopical examination made at the time of the first operation the tumor was benign, and this is further substantiated by the long lapse of time before a recurrence set in. It is very probable that a carcinomatous degeneration occurred in the bases of the papillomata removed, and this led to the rapid infiltration of the interior of the whole bladder, or possibly all of the growth was not extirpated and these remaining portions underwent cancerous degeneration.

It has already been stated that, according to some pathologists, a carcinoma may be secondary to papilloma, or *vice versa*, or both may exist together. This may explain why Dr. Kebler, to whom I referred the first specimen for examination, found no evidence of anything but true papillomatous structure, although Winckel had already detected a carcinomatous degeneration, when the patient revisited him the second time in 1882.

There was, however, no clinical proof of carcinoma, for the same symptoms and fatal termination could have occurred from the excessive proliferation of simple papillomata. A remarkable feature was the almost entire absence of hemorrhage. The patient stated to me that the loss of blood had never, except in the beginning, amounted to much, and only occurred later when large masses were torn away from the base at the time of operation. Such a thing as persistent hæmaturia was not observed.

The prognosis could, of course, be nothing else than fatal, and hence no further surgical attempt was made by me. When the pain from the obstruction was most severe, I reluctantly proposed a cystotomy, but the patient declined, stating to me, what has already been mentioned, that Prof. Winckel had contemplated performing the same operation but soon abandoned the idea. She requested that her last days be made simply as comfortable as possible, and welcomed the approach of death as a harbinger of peace and relief from long years of suffering.

THE TREATMENT OF PULMONARY CONSUMPTION, WITH A REPORT OF FORTY CASES.[1]

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THIS paper is devoted to a consideration of the therapeutics of pulmonary consumption, but the therapy of any disease is meaningless unless the underlying pathological conditions are correctly interpreted, and we shall, therefore, at the very outset, endeavor to outline, in as brief a manner as possible, the recognized principles of the pathology of this disease, and then follow with a discussion of those measures which experience has proven to have the power of controlling and of dissipating it.

Now, pulmonary consumption is generally an extension of chronic bronchitis into the alveoli, or is the product of acute catarrhal pneumonia. In either case, it is a catarrhal affection of the alveolar epithelium. The pulmonary capillaries become engorged, and the epithelial cells multiply and accumulate, and clog up the alveoli with their products. The filling up of the alveoli with these catarrhal aggregates produces small bodies which partake of the shape and size of the former. In this way one alveolus fills up after another, until a whole group or a cluster of them is involved, giving rise to roundish nodular bodies, which are so frequently mistaken for tubercles. They are not tubercles at all, in the technical meaning of that term, but are mere *accumulated inflammatory or catarrhal products*. This train of pathological changes is due to a disturbance of the relationship existing between the production and expulsion of epithelial products. If such a relationship were preserved, or could by any means be restored, it is evident that the disease would at once be called into abeyance. Thus far, the process is chiefly limited to the alveolar walls, their epithelium and their bloodvessels; but the continued accumulation of catarrhal products exerts a decided pressure on the surrounding pulmonary and bronchial capillaries, and the blood supply and nourishment are gradually diminished and finally cut off from these infiltrated areas which, in due course of time, become isolated and circumscribed foreign masses, prone to undergo a slow process of cheesy

[1] Read before the Pennsylvania State Medical Society, Bedford Springs, June 30, 1887.

degeneration, and leave behind cavities, large or small, according to the amount of tissue destruction.

It is during this stage of excavation that the true tubercle is brought to life. A specific poison is derived from the caseating catarrhal nodules, which is chiefly absorbed by the lymphatics. These vessels transport this specific element along their ascending courses as they arise in the alveolar wall, and twine around the walls of the bloodvessels and the bronchioles, and it is here, in the beginning, and in the channels of the lymphatics, that this poison incites new nodular growths, which are *genuine tubercles*, but differ from the yellow, or catarrhal nodules, already considered, both in genesis and in structure. They are evolved from interstitial connective or lymphatic tissue, and are growths, or a hyperplasia, and not mere epithelial or catarrhal aggregations like the so-called yellow tubercles.

It must be distinctly understood, however, that pulmonary consumption is such an intensely sectional disease that what has been said so far in regard to the catarrhal origin of the disease pertains almost exclusively to the apices of the respiratory organs. And it may, therefore, be laid down as a safe rule in the diagnosis and prognosis of chest diseases, that, in by far the great majority of cases, partial or complete consolidation of an apex denotes the first stage of pulmonary consumption. While it is not absolutely true that every case of apical infiltration terminates in pulmonary cavitation, it is enough for the practitioner to know that it is the beginning of a process which, if not checked, certainly tends to end there.

It is very evident, therefore, that the focus of disturbance in pulmonary consumption is an infiltration of the vesicular structure of the lung, and a consequent consolidation, and that the one great desideratum in its treatment is as to the best method of removing this; or, in other words, how is resolution of the affected part to be accomplished? In croupous pneumonia the intra-alveolar infiltration, which consists principally of a fibrinous infiltration, is quickly removed through a process of fatty degeneration; but in catarrhal pneumonia the infiltration does not consist of fibrinous exudation, but, as we have seen, of an accumulation of epithelial products, and, instead of tending toward fatty degeneration, it undergoes a process of caseation. The difference between fatty and cheesy degeneration is the line which divides the fatal nature of the latter from the non-fatal nature of the former disease; and if the therapeutic art can devise a method by which the catarrhal infiltration can be resolved into a fatty, or into a calcareous instead of into a caseous degeneration, the problem of the treatment of pulmonary consumption will be forever solved.

The great obstacle to the successful treatment of pulmonary consumption, however, is the inability to introduce agents which reach and act on the focus of the disease, viz., on the seat of infiltration. Efforts have been repeatedly made to apply medicaments locally through the air-passages by inhalation, as well as through the blood, either by hypodermatic injection, or by gaseous enemata according to the now famous method of Dr. Bergeon. But we have already seen that the most pronounced seat of infiltration is entirely beyond the reach of bronchi or bloodvessels, hence, it cannot be expected that any of these methods have the power to antagonize the citadel of the disease, however capable they may prove themselves in removing some of its concomitants.

We have here then, in most instances, a condition which, to all intents and purposes, is a deposit of inflammatory products differing, in principle, in no wise from a similar deposit in any other part of the body, and the dictates of common sense point out that that which is useful in the one condition is also useful in the other. Every physician can testify to the inestimable value of counter-irritation, and of passive motion in producing resorption of chronic inflammatory deposits in joints, and in the external surfaces generally, and in consonance with this view we have, for a number of years, applied hot flaxseed meal poultices, as well as friction to the chest, in such affections, and, we believe, with the most gratifying results. There is reason for believing that these external applications have the power of increasing the circulatory, the lymphatic, and the cellular activity of the affected part, and, in this manner, gradually remove the most pronounced pulmonary infiltration.

The manner of making these external applications will be briefly described here. First then as to the poultice: This is made by boiling the ground flaxseed meal in a sufficient quantity of water to make a thick paste. Spread it quickly in a layer an inch thick between two pieces of flannel cut in the shape of a jacket, which is well fitted to the top, front, and back of apex, as well as to the anterior and posterior aspects of the affected lung. The edges are sewed or tied together, then it is adjusted to the chest, and the outside well covered with oiled-silk, or some thick woollen material, in order to prevent a too rapid radiation of heat. It must be changed every two or three hours, or sooner if it becomes cooler than the body. This process is to be continued from morning until night, when the poultice is taken off, and the chest is well wrapped with woollen flannel for the night, in order to avoid a sudden disturbance of the bodily temperature during the sleeping hours. The next morning the same programme is begun and continued in the same way for at least three weeks, and so much longer as is necessary. It is much more expedient to poultice during the day only, and allow the patient to rest and be free from the poultice during the night. In fact, this is very important, for if you insist on poulticing during the night also, you are very apt to worry and discourage the patient, and get him to refuse the application altogether.

In a course of five or eight days' poulticing, or perhaps sooner, the change in the physical signs will become most marked. Where previously there was heard nothing but a rough or bronchial respiration, sub-crepitation, perhaps crepitation, and mucous râles show themselves, leading one to suspect that the disease is advancing instead of receding. In the course of a short time, however, the whole part will clear up and become dry. Associated with

these changes in the physical signs, is an improvement in the patient's general condition. He experiences more freedom in his respiratory movements, the cough becomes easier, the expectoration looser, the appetite begins to improve, and he coughs less at night and sleeps better.

In addition to the application of moist heat, we also employ local or general massage once or twice a day. This has the happy effect of counteracting the constitutional lethargy present in phthisis, as well as arousing the local cell activity in the pulmonary organs. Dr. T. Henry Green, in his lectures on the "Pathology of Pulmonary Consumption," delivered in the Brompton Hospital for Consumption, in 1878, speaking of external treatment in this disease, says (p. 102):

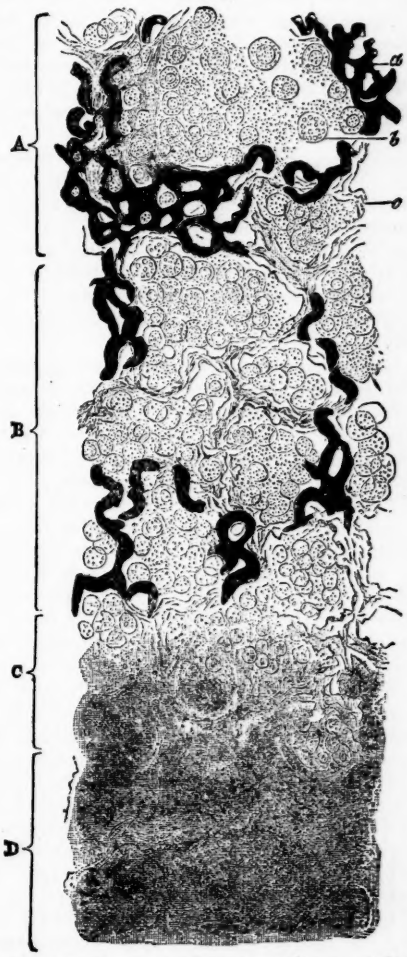
"That in these last named cases (cases where much intra-alveolar matter exists which is capable of removal) attempts to stimulate the circulation in the diseased lungs by douches and friction, and other similar means, such as have been recently advocated by a Dr. A. von Sokolowski, would appear to me to be more in accordance with the teachings of pathology."

Next in importance in the local treatment of this disease, comes the inhalation of medicated air under a very slight pressure, and the introduction of gases by means of enemata. The pathology of the disease as well as the experience in its treatment, teaches, however, that the principal value of both of these methods lies in their power to disinfect the catarrhal products which are located in the bronchial tubes, and in such cavities as may be in communication with these tubes, and that they have but very little, if any, decided influence on the catarrhal products of a solidified lung.

Fig. 1, which is a true representation of a completely infiltrated and caseating nodule with its surroundings,[1] shows us that neither of these channels has any direct communication with the truly solidified portion of the lung, yet it also shows us that there are a few permeable bloodvessels which penetrate nearer to the centre of caseation than the bronchi, hence on the surface it appears that any medicament which is contained in the blood will be carried further into the territory of disease than it will be conveyed by the air tubes. It must not be forgotten, however, that substances administered by inhalation are also absorbed by the blood, and while they do not come in contact with these diseased centres on their first introduction, they will just as certainly come in contact with them ultimately, as if they had been thrown directly into the circulation by means of the hypodermatic syringe, or indirectly by means of gaseous enemata.

One of the most valuable acquisitions to the local treatment of chest disease is the inhalation of compressed and the exhalation into rarefied air, or *vice versâ*. Much has been said and written in regard to this subject, and the opinion is generally held that it is a means of supplying a larger amount of oxygen to the blood than is obtained through ordinary respiration; there is good reason for believing, however, that nearly the whole sum and substance of the value of this practice lies in its mechanical influence on the lungs. If it were true that the question of aëration of the blood was simply one of diffusion of air in the lungs, and not one of a chemical affinity between the hæmoglobin and the oxygen, undoubtedly more oxygen could be utilized by the lungs under this procedure. At the same time it cannot be denied that by a more complete expansion of the lungs under such circumstances, a larger quantity of hæmoglobin will be exposed, and will combine or absorb more oxygen than under ordinary atmospheric conditions, yet from all the experimental data which we have on this point, it is very probable that the increased absorption is very slight.

FIG. 1.



Catarrhal pneumonia, second stage, showing a nodule magnified 350 diameters. A, B, C, and D, representing different areas of the nodule from the periphery to the centre. *a*, injected capillaries of alveolar wall; *b*, catarrhal cells in alveolar cavities; *c*, an alveolar wall. (From HAMILTON.)

Any one who has given the method a faithful trial has found abundant evidence of its usefulness in

[1] On Catarrhal Pneumonia and Tubercle in the Human Lung, by D. J. Hamilton, M.B., F.R.C.S. Ed. Practitioner, vol. xxiv. page 258.

nearly all forms of chest diseases, and especially so in the treatment of the disease under consideration. It gives complete ventilation to, and increases the capacity of, the chest, it relieves the dyspnœa, and acts as a powerful tonic to the whole body. It should be employed with great care, and not be used during a high temperature, nor in an active inflammatory condition of the lungs, except under the very lowest pressure. Indeed, it seems that we have obtained the very best results from it after the activity of the disease had receded, and when convalescence was well under way.

Another important method in the local treatment of this affection is the application of the constant electric current to the chest, according to the recommendation of Dr. Bastings, of Brussels. This procedure consists in chiefly employing the ascending current, and it has special value in those cases in which there is associated with the internal trouble immobility of the thorax, myalgia, or intercostal neuralgia.

In connection with the local treatment we must not lose sight of the marked benefit which may be derived from internal treatment, especially in so far as the question of supplying force and matter to the body is concerned. Pulmonary consumption is preëminently a wasting disease, not necessarily of the lungs but of the whole frame, and any food or medicine which supplies this constant waste, or facilitates digestion and assimilation, is very strongly indicated, and for this reason nutritious foods, cod-liver oil, hypophosphite preparations, etc., are of such great value, if used with discretion. So far as the force-producing value of foods is concerned, there can be no question that cod-liver oil, and the fatty and saccharine foods rank very high, but very frequently we find an aversion to the first, and fermentation following the ingestion of the last two; and hence they must be in a great measure avoided. The non nitrogenous foods which are least likely to undergo fermentation are cream, butter, and alcohol, and the dietetic value of these articles increases in proportion as it becomes necessary to exclude the other foods of this class from the dietary list. The best nitrogenous foods are beef, mutton, eggs, oysters, milk, bread, peas, beans, etc. Animal food often renders the best service when it is chopped into a pulp and consumed when raw. In cases of complete anorexia forced feeding, either by the stomach or by the rectum, must be resorted to, and the food administered regularly three or four times a day, with the addition of a few drops of muriatic acid and a little pepsin. Milk alone does surprisingly well sometimes in this form of feeding.

I have the records of forty cases which have been treated in accordance with the plan here advocated, and we believe that the practical results which it achieved warrants us in recommending it to our fellow-practitioners. The first twenty of these cases were reported by us in a contribution to THE MEDICAL NEWS of October 10, 1885, and we take pleasure in stating that the prognosis which we then gave in regard to these cases has been fully confirmed by subsequent observation. Of the entire forty cases thirty-two recovered. The sixteen of the first twenty cases who recovered have been under occasional observation during a period of from two to nine years, and, so far as we know, are all well at the present time.

In conclusion, we beg to state that these forty cases do not embrace the whole number which we treated according to this system of medication, but, with a few exceptions, include all those of which we possess a complete history in each individual case, from the beginning of the treatment up to the time of death, or to that of recovery. The considerable time which has elapsed in the majority of these cases since suspension of treatment is an important indication as to the value of the latter. We do not by any means parade these statistics with a view of showing that this is a new means for resurrecting the dead consumptive, nor are we unmindful of the fact that just as long as the professional mind is willing to be blown about by every passing therapeutic breeze, so long will a successful solution of the treatment of this disease remain futile; but we earnestly believe that the system which we advocate here, and which has withstood the test of experience in our hands for nearly half a score of years, offers greater prospect of success than any other, and shows that a great deal more can be than has been done for this unfortunate class of patients.

TRANSIENT BENIGN PLAQUES OF THE TONGUE (CASPARY)—EXFOLIATIO AREATA LINGUÆ (UNNA).

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I DESIRE to call attention to a rare, curious, and but little known affection of the tongue, which, within a comparatively recent period has been described by various authors under the names lingual lichenoid, transient benign plaques of the tongue, exfoliatio areata linguæ, wandering rash, annulus migrans.

That the disease is a rare one and little known, may be inferred from the fact that but two cases have been reported in this country up to the present time. This infrequency, and the remarkable character of the affection, have induced me to report with some minuteness the following case, which, having been under observation at short intervals for more than two years, has afforded me ample opportunity to study its various phases and note its peculiarities.

E. C. J., aged forty-two, railroad engineer, in excellent general health, weighing about 175 pounds, consulted me in June, 1885, with regard to a peculiar eruption upon the tongue, which he had first noticed a few weeks previously. Upon inspection, the tongue presented a small, pin-head sized, whitish, slightly elevated lesion, which resembled at first glance an ordinary vesicle upon the mucous membrane. Within a day or two this whitish elevation, having increased to the size of a pea, began exfoliating, leaving a circular patch, deprived of epithelium, surrounded by a narrow, slightly elevated white border.

This patch increased in size from day to day, until it had attained the size of a dime, when it became

stationary; in a few days the tongue gradually resumed its normal appearance. After an interval of ten to fourteen days, during which the lingual mucous membrane seemed perfectly healthy, a new lesion, similar to the first one, made its appearance; ran the same course, and disappeared in the same manner. The eruption required from ten days to two weeks to pass through its various stages. The disease has continued to come and go in this manner until the present time, exhibiting considerable regularity in its different phases. There has never been more than one plaque present at a time; and the disease has been strictly limited to the right side of the organ, never crossing to the smallest extent the median line. Recently, the lesions have been less regular in outline than formerly, but otherwise there has been no change in the appearance of the malady since its first manifestation over two years ago.

The patient had noticed that slight stomachic disturbances, manifest chiefly through eructation of gas, preceded by a few days each new outbreak. Subjective symptoms were almost entirely wanting; but occasionally slight tingling and pricking sensations were present.

In an inaugural dissertation in 1872, under the title of "An Unnamed Affection of the Lingual Mucous Membrane," Bridou first called attention to the disease under consideration, his communication being based upon the study of five cases. Since that time the affection has been further studied, and cases reported by Caspary and Unna in Germany, Gubler, Vanlair, Parrot, and Molénes in France, and by Barker and T. Collcot Fox in England.

Up to the present time the only notice of the disease in the literature of this country is a short article, reporting two cases, by Kinnier.

The affection usually first manifests itself as a small, yellowish or white, slightly elevated patch, ordinarily situated near, or upon the tip of the tongue; this patch soon begins to desquamate, leaving the surface upon which it is seated smooth, shining, and of a bright red color. The lesion enlarges peripherally, preserving its circular outline until the edge of the organ is reached. There may be several lesions at the same time upon the tongue; or, new ones may appear before the old ones have disappeared, and these patches uniting, produce the peculiar appearance which has suggested the name, "geographical tongue."

The yellow hue of the border around the areas denuded of epithelium, upon which Caspary lays considerable stress, is by no means a constant feature—in my own case this border was white; and Unna states that he does not always find the yellow margin described by Caspary, "but more frequently this margin is bluish, grayish, or even silvery white."

In the great majority of cases, subjective symptoms are very slight, or even entirely absent; but in a few cases intense itching of the tongue, with profuse flow of saliva accompanied the appearance of the eruption; and in one case, reported by Vanlair, there was decided pain.

The individual lesions usually run a rapid course; a few hours sufficing often to change the entire aspect of the disease; but, as is evident from the case reported above, this rapid course is not invariable, and each lesion may last a week or more.

The dorsal surface is the usual site of the eruption, but the under surface may also be affected through the extension of the plaques to this latter locality; as a rule, however, the lower surface is not involved.

Owing to the circular shape of the lesions and the mode of extension, the disease has been supposed to be identical with tinea circinata; but thus far, every effort to find the fungus peculiar to this latter affection in the lingual epithelium has failed. Nor has any other fungus been found which may not be found upon the normal tongue. Indeed, apart from the failure to find any microörganism peculiar to this affection, the course of the malady makes the idea of its parasitic origin extremely improbable. The complete spontaneous disappearance for days, weeks, and even months; its strict limitation to the lingual mucous membrane; and the absence of all evidence of contagion, are sufficient to prove its non-identity with tinea.

Although there is a decided resemblance between this affection and some of the syphilitic lesions of the lingual mucous membrane, most observers unite in the opinion that it is entirely independent of syphilis. Parrot, however, whose observations were made in the Hospital for Foundlings, is an exception, and unhesitatingly affirms his belief in its syphilitic nature, declaring that for him it is only a manifestation of syphilis; and he names the disease accordingly desquamative syphilis of the tongue.

I do not think the malady in any way dependent upon syphilitic infection. My patient, I feel quite sure, was free from any specific taint. There was no evidence of such in his own person, nor did any members of his family—he was the father of two children—show any signs of syphilis. Moreover, specific treatment was without effect.

In view of the frequency with which digestive disturbances preceded or accompanied the eruption upon the tongue, a causal relationship between the gastric disorder and the lingual affection seems quite probable. My patient was able to predict the appearance of the plaques upon his tongue by means of the slight stomachic derangement, noted above, which he usually experienced some days previous to their appearance. All three of the cases reported by Molénes suffered from dyspepsia; and in one of them a dyspeptic attack was always accompanied by the appearance of these patches upon his tongue.

Although the malady is usually described as a disease of childhood, I think an examination of the ages of the cases reported makes it evident that it occurs with almost equal frequency among adults.

Of the fourteen cases reported by Unna, but two were children; and Molénes three cases were adults.

That the disease is not a common one, may be learned from the statement of Collcot Fox, that he had met with but ten cases in three years. Although I have examined the tongues of many persons in the past two years, with a view to the discovery of other cases, I have not met with any other example of the malady than the one reported in this paper.

The disease is, as a rule, but little influenced by treatment, local or constitutional. Unna claims to

have derived benefit from the application of sulphur to the diseased mucous membrane. In my own case local treatment was entirely without effect; but the internal administration of arsenic seemed to lengthen the intervals between the attacks. Before the use of this remedy the plaques appeared with great regularity every ten days or two weeks; but soon after beginning with pil. acid. arsenios $\frac{1}{60}$ gr. the interval between the attacks was prolonged to three or four weeks, and the individual lesions ran a shorter course.

3721 SPRING GARDEN ST., September 8, 1887.

THE COMPOSITION OF GLEDITSCHINE OR STENOCARPINE.

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THE introduction within the last few months of a substance having the names above given and claiming to rival cocaine as a local anæsthetic has brought forth quite a number of papers descriptive of its powers from members of the profession who have used it clinically, notably the articles of Dr. Knapp, of New York, and several other observers of almost equal eminence. All these writers, and those of the profession in this city, reported that it possessed the power of anæsthetizing mucous membranes in much the same manner as cocaine, and that the mydriasis produced by it was not only more marked but more prolonged than with the former drug.

Believing that a drug promising so much should be studied as to its influence on the general system, Dr. de Schweinitz and Dr. Hare began the necessary physiological tests. No sooner did they inject some of the so-called stenocarpine solution into the jugular vein, than the typical manometer tracing produced ordinarily by atropine developed itself, and it was, therefore, requested that at least a few tests should be applied to determine its chemical constituents. The following results, obtained in the chemical laboratory, will, I trust, prove to the profession that they have once more been duped by a specious fraud.

Solution of stenocarpine, labelled two per cent., is a straw-colored liquid, having an odor resembling the leaves of erythroxylon coca. Upon the addition of an aqueous solution of bromohydric acid, containing free bromine, a dense, yellowish precipitate was formed, which was almost a solid mass. Upon diluting the so-called stenocarpine by another addition of the bromohydric acid reagent, the yellowish precipitate was produced, of course, in less amount, and, upon standing, small, microscopic crystals, characteristic of atropine, were observed, mixed up with the amorphous precipitate.

According to Niemann,[1] the discoverer of cocaine, the alkaloid when in combination as an auric salt, and when heated in a tube decomposes, with the evolution of a dense sublimate of benzoic acid. The auric salt produced by the addition of auric chloride to the so-called stenocarpine solution, when dried and heated in a glass tube, gave off copious vapors of benzoic acid, which latter was deposited in partly crystalline form on the cooler portions of the tube. This sublimate, when dissolved in water to which a couple of drops of ammonium hydrate had been added, and evaporated at a low temperature until all free ammonia had been driven off, gave a decided flesh-colored precipitate of ferric benzoate upon the addition of ferric chloride.

Wöhler and Losson[1] found upon heating cocaine several hours in a sealed glass tube with concentrated hydrochloric acid, that the cocaine split up into benzoic acid and ecgonine. On treating the stenocarpine in a sealed tube with strong hydrochloric acid, and extracting with ether and evaporating the latter to dryness, a residue was obtained, which, when dissolved in water containing a few drops of ammonium hydrate, and the excess of free ammonia driven off, gave, on adding ferric chloride, the characteristic preciptiate of ferric benzoate.

From these tests we may conclude that the solution contained cocaine.

In order to decide whether an alkaloid was present belonging to the atropine group, the following tests were performed: A drop of the solution was evaporated to dryness at a gentle heat, and Vitali's test applied to the dry residue, but there was no response. The solution was now rendered slightly alkaline by the addition of sodium hydrate and the alkaloids thereby precipitated. The solution was now shaken with ether, which extracted the alkaloids in their free state; the ethereal solution was allowed to evaporate spontaneously and Vitali's test applied to small portions of the dry residue with marked success, the blue color produced by the one or more alkaloids of the mydriatic group with this test was quite distinct.

To determine the presence of chloride and sulphate, as cocaine and atropia are generally employed in this form, a portion of the solution was evaporated to dryness with a few drops of sodium hydrate solution and some crystals of potassium nitrate, and incinerated over a naked flame. The residue was now dissolved in water, acidulated with HNO_3 and boiled, to drive off the nitrous acid. A portion was now tested for chlorine with $AgNO_3$ and a curdy precipitate of silver chloride was formed. To still another portion barium chloride was added, and a cloudiness was produced, showing the presence of a sulphate.

Notwithstanding the fact that the solution was marked 2 per cent., it was found to contain 7.34 parts of solid residue. We may, therefore, safely conclude that this so-called new anæsthetic is but a joining of old remedies in a new dress, namely, a mixture of cocaine and atropine, or another of the mydriatic group, and that it is nothing more than a scheme for the obtaining of money without proper return. As it has been sold to physicians for the high price of $1.25 per drachm of a 2 per cent. solution (?), it seems but right that its falsity be exposed.

UNIVERSITY OF PENNSYLVANIA, CHEMICAL LABORATORY, October 26, 1887.

[1] Inaug. Diss. über eine neue Base in den Cocablättern, Göttingen, 1860.

[1] Ann. Pharm., 121, 372.

MEDICAL PROGRESS.

The "Alternative," Non-quarantine System of England.—England, one of the foremost nations in hygiene, has rejected the quarantine system; and the "alternative" method now in use is thus described by Dr. Thorne, in the *Practitioner* for October, 1887:

Having deliberately abandoned the system of quarantine, we began, many years ago, to organize the system of medical inspection with isolation. The medical inspection comes first into operation on our coasts. The Customs officers board the vessels coming into our ports, and they at once communicate to the sanitary authority the occurrence of any case of cholera, choleraic diarrhœa, or suspected cholera. A vessel so affected is detained until the medical officer of health has examined every member of the crew and passengers. Those actually sick of cholera or choleraic diarrhœa are at once removed to the port sanitary hospital, and any person certified to be suffering from any illness which that officer suspects may prove to be the cholera is detained for a true period of observation not exceeding two days. The medical inspection is thus followed by isolation of the sick. Unlike a quarantine system, this process does not interfere with the healthy, or expose them to risk by herding them together with the sick, but the names of the healthy, and the places of their destination are taken down, and the medical officers of health of the districts in question are informed of the impending arrivals. This part of our system has been named our first line of defence, but it would be of little value if we stopped there. Our main trust is in the promotion of such local sanitary administration in every part of the country as shall rid us of the conditions under which alone cholera can spread. In periods of emergency, as during the past three years, a special medical survey of such districts as are most exposed to risk is organized under the supervision of the medical officer of the Local Government Board, and where needed the sanitary authorities are urged to action. Important as have been the results of the recent survey, they would go for little were it not for the steadily maintained work of sanitary authorities and their officers throughout the kingdom; and we who have been taunted abroad for opposing quarantine because its restrictions touched our commercial interests and our pockets, may justly feel proud that in England and Wales alone the people have, during the past ten years, of their own accord, and apart from Government dictation, spent by way of loan or in current expenditure, over eighty millions sterling, for purposes mainly of a sanitary character. And we may fairly ask whether any corresponding expenditure has in other countries given evidence of real faith in a quarantine system.

The truth is that this kingdom still takes the lead as a progressive Power in the matter of public health. The cost incurred has been immense, but it has not been in vain or unremunerative. Our cholera death-rate, which was 30 per 10,000 in 1849, fell to 11 in 1854, and again to 7 in 1866. Since then we have labored hard to prevent the disease from securing a footing amongst us; and though our labors are far from complete, and the disease has on several occasions been imported, yet it has each time been at once checked. "Our "fever" death-rate, falling with the advance of sanitation, is now less than one-third of what it was before 1866; and our general death-rate has during the same period been reduced from about 22 to 19 per 1000.

On Cholera.—At the Vienna Congress of Hygiene Professor Pettenkofer expressed himself as follows: He was decidedly of opinion that the bacteria alone are by no means sufficient for the spread of the infection, just in the same way as the leaven alone is not sufficient for the making of beer. He was far from believing that all symptoms of infection could be explained by the presence of the bacteria alone; for him, only the x had been found, but not yet the y and the z of the equation. In the first place, the first question that had to be answered was as to the behavior of cholera in its epidemic home, India; whether it derives its origin from patients affected with cholera or from localities which are infected with the disease. It must be taken into consideration that, though the Pendschal is traversed by railways, and though there is a good deal of traffic in that region, some districts in it have remained free from cholera. This proved that the condition of the locality has a predominant influence in the spread of this epidemic. The influence of the season is also very striking. In India the period of maximum intensity of cholera in Lahore is said to be the month of August, and the minimum in the month of April; whereas in Calcutta the opposite is the rule. It would, therefore, be extraordinary if the cholera outside India is absolutely independent of local and seasonal conditions. The statistics of mortality in cholera cases in Germany for twelve years (1848–1859) are as follows: Prussia, 20; Posen, 0.5; District of Leipzig, 16; District of Dresden, 3; Upper Bavaria, 26; Upper Palatinate, 0.3 out of 10,000; and yet the comma-bacillus had come into all these districts. It is also characteristic that with us the cholera disappears completely for a longer or shorter interval of time, and must again be imported from India, which is not the case with other diseases, such as smallpox, syphilis, and other affections, which were equally imported from the East. It is evident from this that the human organism *by itself* does not present a favorable soil for the development of this infecting microörganism. The influence of the season was also shown in a striking way during the abovementioned invasion of cholera in Germany. Out of 167,000 persons who succumbed to the cholera in Prussia from September till April, 1866, 50 000 died in the month of April, and 30,000 in the month of September. In Genoa, where the disease had up to the present prevailed nine times, the cholera period always lasted from July till November, when no case of cholera was observed during the rest of the year. He (the speaker) did not wish to oppose the bacteriological theory, but was also anxious to insist that this narrow speculative horizon should be abandoned, and the conditions of locations and seasons should be attentively studied, as the immunity of certain places cannot be at all explained without these conditions being taken into account. These considerations also include the condition of drinking water. In conclusion, he alluded to England, which, since the opening of the Suez Canal, in spite of the numerous importations from India, was

nevertheless free from cholera, owing to the preventive system which had been carried on in that country.—*British Medical Journal*, Oct. 8, 1887.

COUMARIN, WITH IODOFORM.—LANGLEBERT, of Paris, has employed coumarin, a derivative of tonka bean, to disguise iodoform, in the following formulæ:

Iodoform. pulv.	gr. ¾.
Coumarin.	gr. $\frac{8}{20}$.

For 1 pill.

For a solution.

Iodoform.	gr. 15.
Coumarin.	gr. 5.
Acohol	q. s.

For local use.

In powder.

Iodoform.	gr. 15.
Coumarin.	gr. 3.
Lycopodii	gr. 3.

In liquid vaseline, the following solution may be made:

Iodoform.	gr. 15.
Coumarin.	gr. 3.
Vaselin. liquid.	ʒ 5.

—*Gazette de Gynécologie*, September 15, 1887.

THE ADMINISTRATION OF CHLOROFORM.—ROBERTSON advises the following precautions in the *Glasgow Medical Journal* for October, 1887.

1. I never give chloroform at an earlier period than four hours after easily digestible food has been taken.

2. Always examine the patient's heart immediately before giving it.

3. Ascertain by personal examination that every article of clothing about the chest or waist is quite loose.

4. Bare the neck and chest so that both pulsation and respiration may be easily seen.

5. Never give chloroform in other than the recumbent position.

6. Always have at hand a pair of tongue forceps, and a hypodermatic syringe containing 10 or 15 ♏ ether; or, failing the latter, some amyl nitrite.

7. Always have a third person present.

8. Before holding the towel or inhaler over the mouth and nostrils, it is well to ask the patient to close the eyes, and to count slowly and audibly during the inhalation of the drug. It is also well to know the person's Christian name beforehand.

9. Never bring an inhaler or towel saturated with the anæsthetic suddenly down over the patient's face.

10. Always allow a sufficiency of air to gain access to the mouth and nostrils.

11. Watch most carefully the respiratory movements, and note the cardiac action by an occasional peep at the lips. Should the former become impeded or irregular, or if, when anæsthesia is well advanced, the patient should have greatly protracted expirations accompanied by groaning, stop the chloroform, raise the chin, and by forcibly opening the mouth, bring forward the tongue. This, in my experience, has never failed to promote regular respiration, after which anæsthesia may be carried on.

Should the heart's action fail, as is always manifested by a sudden blanching of the lips, stop the chloroform; lower the head; inject hypodermatically the ether at hand, and begin artificial respiration. A few drops of amyl nitrite applied to the nostrils will be found useful.

In the event of these means failing, I would endeavor to restore animation by *rhythmical compression of the heart*, combined with artificial respiration. The rhythmical compression has been frequently successful in restoring animals poisoned with chloroform; and, although I know of no case where it has been tried on man, I certainly would adopt it should the necessity ever arise. The compression of the heart causes a slight movement of the blood, and also acts as a rhythmical cardiac stimulus.

Böhm asserts that he has restored animation by this means in the case of cats after the heart's action had been arrested by chloroform for as long as forty minutes.

12. The chloroformist should on no account allow his attention to wander from his duties; nor should he ever allow himself to be drawn into conversation by any looker-on. The safety of the patient demands his whole and sustained attention.

13. Watch carefully from time to time the condition of the pupil: if the anæsthesia be profound, and the pupil have been contracted to almost a pin point, and then begins to dilate—the chloroform still being given, and the breathing diaphragmatic—at once stop the drug, and do not continue it until respiration is again quite normal, and the pupil again begins to contract. During the early stage of anæsthesia the centre for dilatation of the pupil (viz., cervical-sympathetic and trigeminus) is stimulated, so that the pupil dilates. With complete narcosis this centre is partially paralyzed, so that the pupil no longer dilates. With more profound anæsthesia, this centre becomes completely paralyzed, and the oculo-motor or third nerve comes into play, by which the pupil may be contracted to the size of a pin's head provided that the paralysis of the centre for dilatation be maintained by the drug being pushed. After a time the oculo-motor, or centre for contraction, becomes in turn paralyzed, and rapid and complete dilatation takes place. It is at this stage that death rapidly ensues, unless means be taken to prevent it. Syncope occurs—caused by reflex stimulation of the cardio-inhibitory centre of the vagus, through the connection between the vagus and sympathetic in the cardiac ganglia.

A SIMPLE INTESTINAL TONIC.—DE SINÉTY is credited with the following combination, by *L'Union Médicale* of October 13, 1887:

℞.—Rhei pulv.	5 parts.
Natrii bicarbon.	
Quinquiniæ pulv. . .	āā 10 "

Used to advantage in dyspepsias, especially those complicating uterine disease.

PREPARATIONS OF MEAT FOR INVALIDS.—DUJARDIN-BEAUMETZ has used meat prepared after the following formulæ to advantage in prescribing meat diet:

Filet of beef	60 parts.
Marine salt	1 part.
Jelly (any fruit the patient may desire)	500 parts.

Also

Uncooked meat	50 parts.
Sweet almonds	15 "
Bitter almonds	1 part.
White sugar	16 parts.

To be pounded together in a mortar or on marble, and then an emulsion to be made with water.

Also

Uncooked meat, grated	100 parts.
Pulverized sugar	40 "
Wine (sherry, port, etc.)	20 "
Tincture of cinnamon	3 "

The only counter-indication to the use of these preparations is the danger of the eggs of tænia.

Meat may be dried at 100° C. (212° F.) and powdered. Microscopic examination of such meat should be made, however, and if bacteria are present in great numbers, the specimen should be discarded.

The powder may be incorporated with the food in various ways, in soups, chocolates, mixtures with beans and peas.—*Les Nouveaux Remèdes*, October 8, 1887.

The Results of Laceration of the Cervix Uteri.—Noeggerath, of Wiesbaden, has studied 100 cases of laceration of the cervix uteri occurring in his practice, and finds the following conclusions warranted from these cases.

Women having uterine diseases conceive more easily if the cervix be lacerated than if it be intact; they abort less easily in the first condition than in the second.

The position of the uterus is not influenced by laceration of the cervix.

The axis of the uterus is not lengthened by cervical laceration.

Erosions and ulcerations are equally frequent in lacerated and intact cervices, and disease of the connective tissue of the cervix is no more frequent in lacerated than in uninjured cervices.

Lacerations of the cervix have no influence on the development of uterine diseases, either in frequency or intensity.

Eversion of the lips of the cervix is never the direct result of lacerated cervix.

Noeggerath believes that a laceration of the cervix is only of importance when recent, when it opens a door for the entrance of infectious organisms into the blood.

The influence of scar tissue on the nerves of the uterus the writer considers great; but the restoration of uterine form he considers without influence on the condition of the organ.—*Berliner klinische Wochenschrift*, October 8, 1887.

Oil of Wintergreen in Therapeutics.—In collecting evidence regarding the value of this substance, Dr. Squibb found that every physician who had used it frequently, had found cases in which it was either powerless, or was not well borne by the stomach, and some of these cases were afterward benefited by sodium salicylate or salicylic acid. But all the testimony elicited was favorable to the use of the oil, and this especially in the large class of cases wherein the attacks were not severe. In all such it seemed to have important advantages over the sodium salicylate. In severe cases wherein the pain was very severe and the elevation of temperature great, the conditions were controlled more promptly and more effectually by the sodium salt.

There was no dissent from the general conclusion reached that the oil, whether natural or artificial, or whether from wintergreen or birch, was an important agent for obtaining the best results of salicylates in a very large class of cases.—*Ephemeris*, October, 1887.

For Pityriasis Versicolor.—Ihle employs resorcin in the following combination:

Resorcin	gr. 75 to ʒ 2½.
Ol. ricini	ʒ 11¼.
Alcohol	ʒ 37½.
Balsam. Peruv.	♏ 8.

—*L'Union Médicale*, October 1, 1887.

Diagnosis of Defective Sight in Infants.—Nettleship, in a clinical lecture printed in the *London Ophthalmic Hospital Reports*, Vol. xi., Part iv., speaks as follows on this point: "It will be self-evident that no exact tests of vision can be applied, and that an infant's sight may easily seem worse than it is. The chief things to notice are whether the child turns its eyes toward the window, or follows the flash of the mirror in the dark room (or, what comes to the same thing, turns its head away or blinks its lids under the same tests), the presence or absence of nystagmus and the state of the pupils. No doubt all babies do not learn to notice—*i. e.*, follow and look at objects, at the same age—I believe that they usually look at a bright light thrown steadily into the eyes a day or so after birth, but that from three to six weeks' education is necessary to enable them to follow a moving object in such a way as to give the appearance of intelligence or "noticing"—and it is failure to "notice" that raises the mother's apprehension, especially if she has had other children whose behavior was different. If the infant's eyes oscillate rhythmically, or even wander constantly though irregularly, its sight is almost certainly bad, for we know very little of primary nystagmus from nervous disease in infants. The pupils are less useful in babies than in adults, because the movements of the infant's eyes at once embarrass observation, and lead to associated movements of the pupils independently of alterations in light, and because the natural range of pupillary action in infants seems to be less than it is when the eye has attained full development. Though I need hardly add that in infants as in adults serious loss of acuteness of vision is compatible with fairly active pupils, I think it is less generally known that, in children at any rate, the light reflex may be present even though the child be absolutely unconscious of light, a condition of which I shall be able to give several instances further on. In examining the pupils of a baby, avoid touching the face or head, and so provoking movements of his head or eyelids."

The Treatment of Whooping-cough by Boric Acid.—Dr. Halloway, of London, has obtained excellent results with the following treatment of whooping-cough:

I confine the patient to one room for a week or ten days, and I instruct that each nostril be insufflated

every three hours during the day, and once during the night, with from two to three grains of finely powdered boric acid. I make no difference in the diet, unless there is some special circumstance which calls for it. At the end of ten days I allow the child to go out in favorable weather. My chief trouble at first was with the instrument. An ordinary insufflator of small size acted fairly well for a day or two, and then became inefficient from the powder fouling the valve, and finding its way into the ball, at the same time it was much too costly to come into general use amongst poorer patients.

In the one I invented the tube is of glass, and is made so that in case of breakage a child might fix in another. The two bends are to do away with the necessity for a valve. The powder is put in the hole in the horizontal position, and lying in this position cannot easily be shaken down into the ball. Instead of the sliding arrangement to cover the aperture, the forefinger of the left hand is simply placed over it, the ball being pressed at the same time with the right. The aperture of the nozzle is not much contracted, so that the powder is scattered over the whole surface of the nasal mucous membrane.—*British Medical Journal*, October 15, 1887.

FOR PRURITUS:

℞.—Acid. carbolic, pur. . . . gr. 30.
Morph. hydrochlorat. . . . gr. $\frac{1}{20}$.
Acid. boric . . . . . ʒ i.
Vaseline . . . . . ʒ 8¼.

—*Revue Gênêral de Clinique et de Thèrapeutique*, October 6, 1887.

THE VALUE OF ROASTED COFFEE AS AN ANTISEPTIC.—HEINE has experimented with infusions of roasted coffee upon bacterial cultures, and reports the following: He found that under conditions favorable for the development of the ethereal oil of coffee the growth of bacteria was hindered, in some instances checked, in some cases they were destroyed. Ten per cent. solution of strong infusion, five per cent. coffee gelatine, and five-tenths per cent. solution were used; the latter was inert. In an emergency freshly roasted and ground coffee, in powder and infusion, may be used to advantage upon superficial wounds.—*Münchener medicinische Wochenschrift*, No. 17, 1887.

THE REPORT OF THE COMMITTEE APPOINTED BY THE EDINBURGH MEDICO-CHIRURGICAL SOCIETY TO INVESTIGATE THE BACILLUS OF SCARLATINA.—This Committee conclude their investigations as follows: 1. That they find that an organism resembling that described by Mr. Eddington as bacillus scarlatinæ is, in a certain proportion of cases, present in the blood taken with due precautions from scarlatinal patients; 2. that they believe that the streptococcus scarlatinæ of Klein is identical with the streptococcus rubiginosus of Eddington; 3. that they have as yet failed to corroborate the conclusions arrived at by Mr. Eddington as to the pathogenetic value of the bacillus scarlatinæ. The Committee desire to obtain the sanction of the Society to continue the investigation, particularly as to (*a*) the morphology of the several organisms; (*b*) the susceptibility of various animals to infection with scarlatinal blood and with the various organisms, their investigations so far having led them to doubt whether calves are susceptible to the action of human scarlatinal poison.

DR. ROSWELL PARK, of Buffalo, is pursuing investigations with cultures of this bacillus; his cultures have been examined by DR. EDDINGTON, who could detect no points of difference between the microörganism isolated by Dr. Park from the blood of a scarlatinal patient and that which he had found.—*British Medical Journal*, October 15, 1887.

THE NUTRITIVE VALUE OF KREATIN, KREATININ, AND THEIR ALLIES.—DR. MAYS, in an article in the *Practitioner* for October, 1887, concludes as follows from his experiments with meat extracts containing these substances:

From these results it is evident that there is quite a marked difference between the action of kreatin and kreatinin and the other agents which were examined; that the action of the two former is similar to that of blood, milk, etc., in sustaining the heart's action, and hence can no longer be regarded as devoid of nutritive properties. It may be true that they are the products of a destructive metamorphosis which begins with the albuminous foods and tissues and ends in the urea, but then these experiments show, too, that their influence as nutritive agents compares favorably with that of a two per cent. blood solution, as will be observed on the tracings. Indeed, I repeatedly found that after working for many hours with a frog's heart, and after it became so thoroughly exhausted as to refuse to respond any longer to the stimulant action of blood, the transfusion of kreatin or of kreatinin, in the proportion of one part to one or two thousand parts of saline solution, would at once spur it on to renewed contractions which were continued for some time longer; thus showing that their power for calling forth cardiac pulsations exceeded that of the blood to a great degree.

In view of the fact that asparagin, theine, and caffeine bear a very close chemical relation to kreatin and kreatinin, to which they are also supposed to be similar in action, it was deemed important to test their influence on the frog's heart; but in no instance were they shown to be capable of reviving the heart's contractions, and hence they must differ in their physiological properties from the two latter agents. In conclusion I will call attention to the striking analogy between the tracings obtained from kreatin and kreatinin, and to those which were obtained from the beef extracts shown in my previous article, which suggests the probability that the stimulating and nutritive virtues which these preparations contain chiefly reside in these two extractives.

CHRONIC LICHEN SIMPLEX.—May be treated to advantage by

Glycerole of starch . . . 30 parts.
Pulverized tartaric acid . . 1 part.

In chronic lichen about the genitalia a mixture of

Glycerole of starch . . . 30 parts.
Oil of cade . . . . 5 "

is useful; the proportion of the latter ingredient may be raised to equal parts by gradual increase, with advantage.—*L' Union Médicale*, October 6, 1887.

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SATURDAY, OCTOBER 29, 1887.

CHOREA AND HEART DISEASE.

IT has long been recognized by clinicians that serious valvular disease might have its origin in an attack of chorea, but the general impression has been that the cardiac mischief was rather the result of the rheumatism which so often accompanies the choreic outbreak. The subject has been investigated anew by OSLER, who has given the results of his observations in *The American Journal of the Medical Sciences* for October, 1887. The questions considered are the condition during the attack and the state of the heart some years subsequent.

A very common symptom of chorea is a systolic murmur, usually in the mitral region, the cause of which has given rise to considerable controversy. Osler regards it as evidence of endocarditis, relying on the extraordinary frequency, almost constancy, indeed, with which this lesion is found post-mortem; on the character and location of the murmurs, which are those which experience has shown are usually associated with inflammation of the mitral segments; and lastly, on the record which he is able to give of the subsequent heart history of 110 patients. This forms the most valuable part of the paper, as it represents, for the first time, the results of the examination of a large number of choreics at periods long after the attack. No cases were examined in which the chorea had come on after March, 1885. Of the 110 cases, in 43 the heart was normal, in 54 there were signs of organic disease, and in 13 there was functional disturbance. The very large proportion of those with heart disease may be in part due to the fact that such individuals would be more likely to return when requested, having had intimations of heart trouble, but it is stated that in only 22 was there palpitation or pain. Even with this allowance the number is very large, and shows that chorea plays a more important rôle in the causation of valvular disease than we had supposed.

The influence of rheumatism is indicated by the fact that 40.7 per cent. of the 54 cases had had articular trouble, but the large balance of 59.3 per cent. shows that this is not the sole factor in producing the endocarditis. No attempt is made to discuss the pathology of chorea in the light of the heart lesions. We infer that the author regards the endocarditis, in the majority of cases, as of choreic, not of rheumatic origin, and he urges greater care in the management of those patients in whom a mitral murmur develops during the course of the disease.

GASTROTOMY FOR FOREIGN BODIES IN THE ŒSOPHAGUS.

UP to a very recent period the view was held that when a foreign body was impacted in the œsophagus, and could be neither extracted by the mouth nor pushed into the stomach, it should be removed by cutting into the canal, provided it was not seated very low down or near the cardia. In the latter event the case was left to nature, with the hope that in the near future it might be vomited up, or find its way into the stomach and be passed by the rectum. Remarkable instances of these occurrences have been recorded as early as three months and as late as thirty-two months, the arrested substance, in the interval, giving rise to very little inconvenience. Such a fortunate issue should not, however, be anticipated, since, whether seated high up or low down, the foreign body is likely to set up inflammatory mischief which may result in death.

When the intruder is arrested near the entrance of the œsophagus into the stomach, particularly if it be angular or irregular in shape, though of only moderate volume, we may be permitted to express the belief that the axiom formulated by Arnott in regard to a foreign body seated high up, namely, that the rule of practice ought to be removal by incision, although no urgent symptoms may be present, when it has resisted a fair trial for its extraction or displacement, is correct. Whether the future will verify the wisdom of this statement remains to be seen; but that the foreign body should be extracted through a gastric incision when it gives rise to much suffering, along with progressive emaciation and loss of strength from difficulty in swallowing nourishment, or when it effectually prevents the passage of food into the stomach, is an assertion, the truth of which the reflecting surgeon can scarcely deny, especially as it has been successfully confirmed in two cases.

In the first of these cases, recorded by RICHARDSON in the *Boston Medical and Surgical Journal* of

December 16, 1886, a denture of four teeth, which had lodged near the cardiac end of the œsophagus, and had, in eleven months, greatly reduced the man's weight, maintained continuous pain in the epigastrium, and scarcely permitted him to swallow enough liquid food to keep him alive, was extracted by an incision through the abdominal wall and the stomach, which admitted the hand and half of the forearm. At the end of four months, the man was enjoying excellent health, and had gained fifty-four pounds. In the second case, reported by BULL in THE MEDICAL NEWS of last week, a peach-stone so completely blocked the canal at the distance of thirteen inches from the incisor teeth that alimentation by the stomach was rendered impossible. All efforts to dislodge the body having proved fruitless, it was extracted by gastrotomy, and the child made a rapid recovery.

The operation, as performed by Bull, the steps of which are fully described, will commend itself to the practical surgeon, particularly as gastrotomy for foreign bodies in the stomach is a procedure which has heretofore been attended with comparatively little risk.

TETANUS IN PREGNANCY.

THERE is no more characteristic phenomenon of the pregnant state than exalted nervous susceptibility; and analogy would lead us to expect that tetanus would be frequently met with among the many nervous disorders of this condition. Such, however, is not the case; an English writer has reported a considerable number of cases in India, under conditions peculiarly favorable, but Sir James Simpson had been able to collect but 28 cases, and MEINERT, of Dresden, has found but 9 cases in the literature of the subject, to which he adds, in the *Archiv für Gynækologie*, Band 30, Heft 3, a case recently treated by himself.

His patient was a robust washerwoman, aged forty. The predisposing cause appeared to be residence in damp, ill-lighted rooms. Her first and second pregnancies, however, were normal; in the second month of the third pregnancy tetanus, mild in degree, but typical in its symptoms, appeared, and resisted treatment, recovery following the birth of the child. The fourth and fifth pregnancies were normal, but in the fourth month of the sixth pregnancy tetanus was ushered in by a sensation of heaviness in the extremities, which often occurred suddenly during sleep, or when entering a warm room. Painful, tonic spasms of the fingers; painful sensations pervading the upper extremities; twitching in the eyelids; irregularity in respiration and speech; and violent movements of the arms, which often inflicted blows upon the patient's body, were the phenomena characterizing an attack. The paroxysms occurred daily, lasting several hours, and often returning several times in twenty-four hours. In the interval between the attacks her condition was normal.

The medication which Meinert employed was 30 grains of potassium bromide three times daily, and 2½ drachms of chloral hydrate in 6 ounces of water, a teaspoonful every ten minutes until the paroxysm remitted. Three days after the commencement of treatment a tænia was expelled, its variety was not ascertained. The paroxysms continued, but under the medication employed gradually diminished in severity.

After the birth of a healthy child at term, tetanic contractions of the hands and feeble spasms of the facial muscles persisted for several days. The child was attacked, eight days after birth, by convulsions which yielded to chloral, but in which it died, during a relapse.

Analysis of Meinert's collection of cases, eliminating those of doubtful character, shows that the disease occurs most often in women more than thirty years old. This corresponds with Gower's analysis of 142 cases of tetanus in women, from various causes, where the average age is between thirty and forty. In males the average age is between ten and twenty. The attacks occurred before the sixth month of pregnancy. All ended in recovery, although of Sir James Simpson's cases but five recovered. In four cases the cure was spontaneous, and followed parturition.

The cases collected show no complication or sequelæ, and the writer's case is peculiar in the occurrence of trophic disturbances of the nails of the feet and hands, and the formation of double cataract. The possible influence of an intestinal parasite in Meinert's case is freely recognized, but the sequelæ and the death of the child make a more profound affection of the nervous system than that usually produced by tænia probable.

Bleeding has been practised in these cases in treatment, but Meinert saw no reason to exceed the sedatives which he employed.

Eclampsia of renal origin at once suggests itself as the condition most nearly allied to the case described. The writer, however, has evidently differentiated his case to his own satisfaction from this affection, although he does not mention the clinical tests employed. As an example of one of the most serious disturbances of the nervous system to which the pregnant woman is liable, Meinert's case is highly interesting and instructive.

IS ERGOT A PROPER DRUG TO COMBINE WITH DIGITALIS?

IN the *Berliner klin. Wochenschrift*, No. 34, is an article by ROSENBACH on the combined use of these

two drugs, in which he recommends their administration particularly in aortic insufficiency, in idiopathic dilatation of the heart, with alterations in the elasticity and contractility of the bloodvessels, and in asthma.

Notwithstanding the fact that he reports favorable results from such practice, we doubt very much whether the ergot, at least in the first disease mentioned, did as much good as it did harm, since its physiological action, when considered with the physiology of the circulation, really contraindicates its use. The reader will recall that the ventricular systole in driving out the blood into the systemic circulation produces a sudden increase in the arterial distention over and above the blood current, and that having done this, it no longer acts directly in causing the onward flow of the blood, but is in a manner supplemented by the aortic valves. The blood is now between several opposing forces, for the vital contractility of the arterial wall presses on it and its onward flow is resisted by the muscular arterioles. If the aortic valve is perfect, however, and no regurgitation can take place, the blood, unable to go backward and compressed laterally, chooses the path of least resistance, viz., through the arterioles. It is, therefore, seen that the aortic valve influences very greatly the onward flow of the blood stream, and that in direct proportion to its lack of integrity and the resistance offered by the arterioles is the leakage back into the ventricle. It at once becomes evident that the administration of ergot in contracting these arterioles in a case of aortic insufficiency must induce an increased regurgitation.

Again, we have always held the opinion, and we think that most therapeutists will agree with us, that aortic insufficiency is of all the valvular lesions of the heart the very one which rather contraindicates the use of digitalis, in that it not only prolongs diastole, but likewise increases the ventricular capacity, thereby permitting a greater opportunity for regurgitation into the ventricle.

A MEETING of the Executive Committee of the Congress of American Physicians and Surgeons, for the purpose of organization, was held on October 5th in the Hall of the College of Physicians of Philadelphia. The special societies were represented as follows:

American Surgical Association, Dr. Claudius H. Mastin, of Alabama.

American Otological Association, Dr. Cornelius R. Agnew, of New York.

American Ophthalmological Association, Dr. D. B. St. John Roosa, of New York.

American Laryngological Association, Dr. J. Solis Cohen, of Pennsylvania.

American Neurological Association, Dr. L. Carter Gray, of New York.

American Dermatological Association, Dr. I. E. Atkinson, of Maryland.

American Climatological Association, Dr. A. L. Loomis, of New York.

Association of Genito-Urinary Surgeons, Dr. John P. Bryson, of Missouri.

American Association of Physicians, Dr. William Pepper, of Pennsylvania.

The Committee was organized by the election of Dr. Pepper as Chairman, and Dr. Bryson as Secretary.

It was decided to hold the Congress of 1888 in Washington, D. C., on Tuesday, Wednesday, and Thursday, September 18th, 19th, and 20th, respectively. The sessions of the Congress will be held in the evenings, leaving the mornings and afternoons free for the sessions of the special societies participating.

The following officers of the Congress were elected:

President.—Jno. S. Billings, M.D., LL.D., U.S.A., of Washington, D. C.

Vice-Presidents.—The Presidents-elect of all the participating societies.

Treasurer.—Dr. W. H. Carmalt, of Connecticut.

The arrangement of the programme for the sessions of the Congress was referred to the President, the Secretary, and the Chairman of the Executive Committee.

THE Michigan State Board of Health has received information from Dr. Sifton, Health Officer of Sutton's Bay township, which illustrates in a striking way the manner in which this country obtains contagious diseases from the old countries. October 2, 1887, a family arrived in Sutton's Bay, Keelanaw County, direct from Norway. The family came over in the steamship Ohio, of the Inman Line, reaching New York on September 30th. Scarlet fever was on board the steamer during the passage, one child dying before the landing, and "several more were sick in the same way." One child of this family was taken sick with scarlet fever the day after reaching New York. The family, however, proceeded over the New York Central, and the Lake Shore and Michigan Southern Railways, to Michigan; then over the Detroit, Grand Haven, and Milwaukee, and the Grand Rapids and Indiana Railways, to Traverse City, then to Sutton's Bay. Another child of the family has since come down with the disease. The family had a certificate, signed by the surgeon of the steamer, that they had been protected by vaccination against smallpox; so they passed the quarantine authorities at New York without detention, after they had been exposed to a contagious disease which

causes more deaths by far in this country than does smallpox.

THE following new appointments have been made at the New York Post-Graduate Medical School and Hospital:

Dr. Robert Abbe, professor of clinical surgery.

Dr. Henry D. Chapin, professor of diseases of children.

Dr. J. U. Girdner, instructor in clinical surgery.

Dr. A. M. Phelps, professor of orthopœdic surgery.

THE new buildings of the New York Skin and Cancer Hospital, at the Country Branch, Fordham Heights, will be formally opened to-day, at two o'clock. W. Q. Riddle, Esq., President of the Hospital, will give an address of welcome, and Dr. A. Jacobi, President of the Medical Board, will give an address on Cottage Hospitals. The Country Branch Hospital is situated at Fordham Heights, New York City, about one mile above High Bridge, between Sedgwick Avenue and the old McComb's Dam Road.

THE New Jersey Sanitary Association holds its thirteenth annual meeting at Trenton, on October 28th and 29th, under the presidency of Dr. W. K. Newton, of Paterson. The object of the Association is to bring together all who feel an interest in the investigation of facts and principles relating to public and personal hygiene, and who desire to diffuse among the people such information as will secure deliverance from avoidable causes of disease. The titles of a number of interesting papers are on the programme.

THE Sixth International Congress of Hygiene was held in Vienna, in the early part of this month, and appears to have been a most interesting and successful gathering. The next Congress will be held in London, in 1891, and the following Committee of Organization was appointed: Dr. Brouardel, for France; Dr. Dobroslavine, for Russia; Dr. J. S. Billings, for America; Prof. F. de Gruber, for Austria; Dr. Roth, for Germany; Dr. Mosso, for Italy; and Prof. Corfield and Mr. Shirley Murphy, for England.

REVIEWS.

TRANSACTIONS OF THE AMERICAN GYNECOLOGICAL ASSOCIATION. Volume II., for the year 1886. 8vo. pp. 512. New York: D. Appleton & Co., 1887.

THIS Society now numbers fifteen Honorary and fifty-eight Active Fellows, the number of the latter being limited to one hundred. The recent meeting in New York, from the advantages of the place selected, and the fact that many invited gynecologists of Europe were present, was one of unusual interest, and will no doubt aid to increase the Fellowship of the Society in both orders. Prof. Alexander J. C. Skene, of Brooklyn, had the honor to preside.

Space will not admit of more than a mere notice of the volume under review. Dr. H. P. C. Wilson read a paper in which, after an extensive experience, he advocated the old and now generally condemned operation of division of the cervix backward in some forms of anteflexion of the uterus, with dysmenorrhœa and sterility. After performing the operation in 400 selected cases, he was prepared, from the results attained, to recommend it.

Dr. Ellwood Wilson, of Philadelphia, reported six cases of recent lacerations of the cervix uteri, cured by applications of the nitrate of silver in strong solution.

Prof. Fordyce Barker drew attention to the many remarkable coincidences on record, which have led to the belief that the fœtus in utero may be influenced by maternal impressions received later than the usual period for the perfection of embryonic form.

Dr. George J. Engelmann, of St. Louis, presents a treatise on "Electricity in Gynecology," of 148 pages, or more than a quarter of the volume. Three observers —Drs. John Byrne, Engelmann, and William H. Baker —collectively occupy more than one-half of the volume with the curative results of galvanic appliances in some of the diseases peculiar to women.

Dr. James R. Chadwick, of Boston, enters at some length into the value of the bluish color of the vaginal entrance as a sign of pregnancy, and shows the peculiar appearance by a colored plate.

Seven papers are given that were presented by applicants for election to active fellowship. These are very creditable to their authors, and some bear evidence of being the product of a large experience in gynecological practice. While the volume is in some of its papers one of much interest, it is, as a whole, less instructive and inviting than some of its predecessors. We hope to see a revival of interest from the work of incoming Fellows, some of whom are in their days of youth and activity.

PUBLIC HEALTH. THE LOMB PRIZE ESSAYS. Award made at the Thirteenth Annual Meeting of the American Public Health Association, Washington, D. C., Dec. 10, 1885. With Appendix. Second edition. 8vo. pp. 198. Concord, N. H. 1886.

I. HEALTHY HOMES AND FOOD FOR THE WORKING CLASSES. By VICTOR C. VAUGHAN, M.D., Ph.D., Professor in the University of Michigan.

II. THE SANITARY CONDITIONS AND NECESSITIES OF SCHOOL-HOUSES AND SCHOOL-LIFE. By D. F. LINCOLN, M.D., Boston, Mass.

III. DISINFECTION AND INDIVIDUAL PROPHYLAXIS AGAINST INFECTIOUS DISEASES. By GEORGE M. STERNBERG, M.D., Major and Surgeon, U. S. Arm .

IV. PREVENTABLE CAUSES OF DISEASE, INJURY, AND DEATH IN AMERICAN MANUFACTORIES AND WORKSHOPS, AND THE BEST MEANS AND APPLIANCES FOR PREVENTING AND AVOIDING THEM. By GEORGE H. IRELAND, Springfield, Mass.

THROUGH the liberality of Mr. Henry Lomb, of Rochester, N. Y., the American Public Health Association

has been enabled to publish these admirable essays, which were selected as the best among many offered in competition for prizes. The present volume has been prepared in its handsome and durable style for public and private libraries, but a cheap edition in pamphlet form has also been issued for general circulation. The object of the publication is to diffuse useful information upon sanitary topics of universal interest as widely as possible, and as a basis for the success of this praiseworthy aim the papers have been written in a clear, attractive style by authors thoroughly familiar with their subjects and the wants of the public.

The selection and endorsement of these essays by the Association is a sufficient guarantee of their reliability and meritorious character, and careful examination does not fail to corroborate the good judgment displayed in making the awards. Though most of the essays are designed for the improvement of the environment of school children and the working classes, there is instruction for every one in the whole series of papers.

The book has a copious index, and is well printed on fine paper, and handsomely bound in a style uniform with the annual volumes of the Public Health Association. The essays are also prepared separately in pamphlet form, and are sold at cost, and most liberal inducements have been made for the widest distribution of the work. It is the desire of the Association that a copy may be placed in the hands of every family in the country, a wish which we sincerely hope may be most fully realized.

SOCIETY PROCEEDINGS.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Stated Meeting, October 12, 1887.

THE PRESIDENT, J. SOLIS-COHEN, M.D., IN THE CHAIR.

DR. WHARTON SINKLER read a paper on

MIGRAINE IN CHILDHOOD.

Migraine, he said, is more common in children than is generally realized. Popularly, the attacks of "sick-headache" which many children have, are attributed to disorder of the stomach from some indiscretion in diet, and many physicians hold the same view.

The fact that migraine is a disease which is especially likely to begin about the period of puberty has long been recognized. Many children begin to suffer from characteristic attacks as early as seven or eight years of age, and continue to have them until adult life; or, indeed, the attacks may continue all through life. Still, it is most often the case that when migraine begins in early childhood, it becomes more severe at puberty, and ceases by the time full development is attained. The influence of heredity is seen to a marked degree in migraine. The children who suffer from migraine often belong to neurotic families, and it is common to find among the near relatives instances of other nervous disorders. Children who suffer from this disease at and before the time of puberty may, in later life, become the subjects of some of the grave neuroses, such as epilepsy or insanity. The great value of the early recognition and cure of the disease is, therefore, apparent.

In addition to the influence of heredity, there are many other causes which may induce migraine in children. Improper food, bad atmosphere, and, above all, an insufficient amount of sleep, with overtaxing of the brain, all tend to predispose to or directly bring on migraine. When a child first begins school he often complains of more or less headache. The close air of the school-room and too little exercise are enough to account for some of these headaches. In other children, mere mental effort brings on attacks of pain in the head. The same holds good of migraine observed in chorea, namely, that it is the studious, ambitious children, who stand at or near the head of their classes, who suffer from both of these affections. In many instances there are ocular defects, which cause eye-strain, and in those cases the attacks of migraine continue to become more and more frequent in proportion as the eyes are used, until the eye-defect is corrected by glasses. It is not in all cases, however, that the headaches which follow excessive use of the eyes are due to ocular defect. The following case, which Dr. G. de Schweinitz described to the writer, illustrates this fact:

Charles C., aged fifteen. A slender lad, who has grown rapidly; clear, fair skin; slightly anæmic. No noteworthy illnesses. Goes to school and studies hard. One year ago he began to have headaches, as follows: sudden hemiopia, followed by intense pain on left side of head, and marked numbness along the arm of the corresponding side, and terminating finally in nausea, and occasionally in sick stomach. Attacks varied in frequency and in severity. With the exception of the migraine, the anæmia, and an imperfect digestion, no unsoundness was discovered.

Examination of eyes: color of eyes blue: pupils normal and equal. Vision: R. E. $\frac{15}{XV}$; L. E. $\frac{15}{XV}$. Accommodation: R. E. 8.3 D.; L. E. 8.5 D. Muscular anomaly, slight insufficiency of interni; color perception normal; refraction error, hypermetropic astigmatism. *Ophthalmoscopic examination:* R. E., nerve of normal color; slight conus out and some retinal striation around disk; choroid disturbed; numerous lymph reflexes. L. E., similar disk; retina more striated, with veiling of lower edges of disk. Field of vision normal. The treatment was largely dietetic and hygienic. The medicines used were, after the correction of the dyspepsia, syrup of the hypophosphites, strychnia, and iron. The refractive error was not corrected. The headaches have practically ceased.

Migraine from eye-strain is not uncommon in children. Dr. de Schweinitz has kindly furnished me with the following case, which is also of interest on account of the superficial optic neuritis which exists:

W. C. W., aged seven. When two years old had "gastric fever," from some imprudence of diet. Has had whooping-cough and varicella. Since two years of age, has experienced great difficulty in digesting and assimilating food, often going for long periods without being able to take any solid food. One and a half years ago, or when he began to go to school, began to have dull frontal headaches. Occasionally has paroxysmal headaches, quite different in type, beginning with extreme pallor, violent head pain, confined to one-half of forehead, and followed by nausea, but no vomiting. There are no visual disturbances preceding these

attacks, and no auræ of any kind. These headaches have been present since he was two years old. An unusually healthy looking boy; lives in the country. Examination of urine negative. The boy is unusually bright and quick at his lessons, but has not been pushed.

Examination of eyes: color of eyes blue; pupils normal and equal. Vision: R. E. $\frac{15}{XV}$; L. E. $\frac{15}{XV}$. Accommodation: R. E. 12 D.; L. E. 12 D. Muscular anomaly, insufficiency of superior recti; color perception normal; refraction error, hypermetropia = 1 D. *Ophthalmoscopic examination:* R. E., disk an irregular oval; all edges hazy, those on nasal side hidden; surface of disk gray-white; lymph sheaths full; veins tortuous. L. E., nerve oval; all edges, especially nasal, hazy; veins full and tortuous.

Diagnosis: Superficial neuritis and hypermetropia.

Migraine does not appear to affect one sex more than the other, but if any difference does exist the preponderance is in boys. Precocious sexual development in either sex often leads to this form of headache. It is very seldom that we meet with it in robust and hearty children; but it is seen in those who do not get enough fresh air and who are thin and pale; or in children who think and read too much, and who do not romp and play, but prefer to sit with older people and drink in conversation far beyond their years.

The symptoms of migraine in young children are not far different from those in adults. The attacks are markedly paroxysmal, occurring from two to six weeks apart, and become more or less frequent, according as the conditions for their development are favorable or otherwise. There may be only one or two attacks a year. The attacks may be preceded by premonitory symptoms, such as chilliness, and a feeling of lassitude, and the child is dull, and indisposed to play. Sometimes there are subjective ocular symptoms in the form of specks floating before the eyes, muscæ volitantes, or balls of fire, and bright zig-zags. Occasionally the child complains of hemiopia. These symptoms last half an hour or more, and may be followed by subjective numbness of the tongue, lips, or of the entire half of the body. Putnam had a patient in whom in boyhood migraine was represented by repeated attacks of numbness and tingling of the right side of the face, and right half of the body, with aphasia, and hemianopsia, followed by but trifling headache, or none at all. Later in life there were severe attacks of pain. Usually as soon as the subjective auras disappear the pain begins. At first the pain is dull, and it may be confined to one side of the head; generally, in children, the pain is on both sides of the head, at least they complain of the pain as being general, and it may be either frontal or occipital; most frequently it is frontal. There is often nausea throughout the attack, or it may terminate in vomiting, or a free flow of urine, or sometimes there are two or three diarrhœic stools. After the crisis is reached the child may fall asleep, and after a nap waken well. The attack does not always terminate in a crisis; after a gradually increasing headache for several hours it gradually subsides. The face in the beginning of an attack may be pallid, and as the pain increases the face becomes deeply flushed, and the eyes suffused.

The treatment must be preventive and curative. If a child is of a neurotic family, insist on ten hours' sleep at night, and keep him from too prolonged application to his books. Encourage outdoor sports of all kinds, and, if possible, keep such a child in the country for many months in the year. The diet should be abundant and nutritious, milk, eggs, soups, and broths, with meat in moderation, and the various cereals, and plenty of vegetables and fruit. Such children can eat largely, and plenty of fatty articles of food are well borne and are of great advantage.

If a child has already begun to have attacks of migraine, nothing is of more value than attention to the general health. Such children are often pale and thin, and have but little appetite. If change of air can be secured, it is often enough to obtain relief from the attacks. If we cannot send the patient away, we must resort to tonics and good feeding. Cod-liver oil, if it can be borne by the stomach, is of the greatest possible use in such cases. If the child cannot take oil, we must introduce fat into the system in some other way. Cream and plenty of butter may be given.

Special anti-neuralgic drugs are seldom indicated in these cases, but sometimes the bromides may be given with great advantage, especially in those children who are of a very nervous temperament, and in whom any effort at brain-work causes headache. It should be given in small doses, and continuously for some weeks.

In many cases some ocular defect will be found which will require correction by glasses, and many cases of migraine in children have been cured by this means alone. In all cases of migraine we should look carefully into the condition of the teeth, and have any unsound ones filled or removed.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, October 20, 1887.

THE PRESIDENT, A. JACOBI, M.D., IN THE CHAIR.

DR. CLINTON WAGNER read a paper on

COLORADO SPRINGS AND DAVOS-PLATZ AS WINTER HEALTH RESORTS, COMPARED.

Having alluded to the change which had taken place in the minds of the profession in regard to the kind of climate most beneficial to patients suffering from phthisis, since a few years ago, when warmth and equability were considered the prime essentials, he said that Davos is half the year covered with snow, and that at Colorado Springs the difference between the temperature of the day and night is sometimes as much as 130° F. Yet both these places were once held in the highest esteem as health resorts for this class of cases. There is, in fact, no section of country in the world which combines warmth and equability with dryness. Dr. Denison, of Colorado, in one of his valuable papers, has said that variability is characteristic of dryness, and equability is found only with dampness. It was Dr. Herman Weber, he believed, who was the first to recommend high, dry altitudes for phthisis.

Dr. Wagner said that he could speak of both Colorado Springs and Davos from his own personal observations while residing at these resorts. Colorado Springs

is at an elevation of more than 6000 feet above the sea, and five miles to the north of it is Pike's Peak, over 14,000 feet in height. It has the dryness of an inland desert, the climate is exhilarating, the atmosphere more clear than that of Italy, and its scenery compares with that of Switzerland. From September to the latter part of April or first of May, there is no rain. There are no fogs or mists, and while rain occasionally falls, it rapidly disappears. The sun shines for 330 days in the year, and in the sun the temperature is warm, 90° to 130°. There are always at least 50 degrees between the temperature of the sun and shade.

If the atmosphere were not cold and dry, the heat of the sun would be intolerable. Sometimes at night the thermometer falls considerably below zero. One great advantage of Colorado Springs is that the invalid can be so constantly out of doors. The wind is the most disagreeable feature of the place, and this is worst in the months of November and March. On the whole, however, there is less wind than in the resorts of the Riviera. In pulmonary diseases the results are excellent, and cases with tuberculous cavities have been reported cured. Nervous and irritable patients, with a tendency to vascular excitation, should, however, never be sent to Colorado Springs, as the climate is too stimulating for individuals of this class.

From all that he could learn, this resort is not contra-indicated in laryngeal phthisis, provided the patients are improving in other respects. He had seen one case of this kind cured, and one other that was improved and on a fair way to recovery.

The hotels and boarding-houses are excellent, and good furnished houses, provided with all the modern conveniences, can be secured at reasonable rates. There are fine schools, churches, libraries, a theatre, and a club. The society is excellent, and there are plenty of horses which can be bought or hired cheap, so that riding and driving are conspicuous features of the life there. Moreover, the accessibility of the place is a great recommendation to Americans.

Davos is an Alpine Valley in Switzerland, 5300 feet above the level of the sea, and protected from the winds by neighboring high ranges. The climate in many respects resembles that of Colorado Springs, although the temperature in the shade averages lower—from zero to 25 below. The north wind is thoroughly exhilarating and bracing, but the south wind is enervating, damp, and disagreeable. When the snow melts the atmosphere is naturally full of humidity. The snow usually lasts from the latter part of October to the early part of April. The invalid's day is very short, lasting only from 10 A. M. to 3 P. M. So far as his observations went, very serious cases do not recover at Davos, and he thought it a resort better suited to patients with incipient phthisis and those who retain a certain amount of robustness. The air is entirely too cold to sit out of doors when there is no sun.

Dr. Wagner then proceeded to enumerate some of the points of difference between the two places and the advantages of the American over the Swiss resort. At Colorado Springs there is an average of twenty-eight good days in the month; at Davos, twenty. At Colorado Springs there are eight hours of sunshine in the day, at Davos four hours and a half. At Colorado Springs the invalid can indulge in riding, driving, tennis, picnics, etc., while at Davos the only out-door diversions are skating and tobogganing, and these are too violent exercises for many patients. At Colorado Springs the invalid can enjoy the comforts and advantages of home life, while at Davos he is compelled to stay in a hotel, and it is well known that hotels frequented by many phthisical patients always partake more or less of the nature of hospitals and are depressing in their influence. At Colorado Springs the patient can remain throughout the year; but at Davos he is obliged to leave in the early spring on account of the dampness from the melting snow. At Davos the hotels are excellent, and there is plenty of amusement. Formerly the drainage of the place had been very defective, but within the last few years a most efficient system of drainage, said to be the best in Europe, has been introduced. As much cannot be said for Colorado Springs, where there is no public system of drainage whatever, and cesspools and old-fashioned privies are still in use. He understood, however, that a complete system is now in contemplation, and, with the natural facilities of the place for good drainage, he had no doubt that it could be made very perfect.

On the whole, he would say that while Davos is, no doubt, the best high altitude health resort in Europe, the advantages of Colorado Springs are greatly superior in many respects. Moreover, there are at Manitou conditions very similar to those at Davos, although it is at an altitude more than a thousand feet greater, and the shortest days for the invalid are six hours in length. It is well sheltered from the winds, and possesses some excellent mineral springs. At present, however, it is comparatively deserted in the winter.

DR. ALFRED L. LOOMIS said that the climatic treatment of phthisis is constantly being regarded with more and more favor, and deservedly so. Eighteen years ago he read a paper before the American Medical Association, in which he took the ground that it was very wrong to send patients to warm climates, because a stimulating air was required in order to enable the patient to take out-door exercise. From his studies in connection with this subject since that time he had arrived at certain conclusions. In the first place, he did not believe that there is any locality which is *par excellence* the place for phthisical patients; but he recognized that two things are absolutely essential for a curative effect. The first is a pure atmosphere, an aseptic atmosphere, if we choose to call it so. Pure air can be taken into the lungs on the same principle that antiseptics are employed in external diseases and in surgical cases. He did not think it is possible to treat tuberculous cavities with antiseptic solutions, and doubted whether inhalations or other forms of applying antiseptic agents have any real effect in destroying bacilli. But if we can keep the lungs constantly bathed with an aseptic atmosphere, we are doing all that is in our power to arrest the disease. Under the beneficial influences of such an air the temperature is reduced and distressing nervous symptoms are relieved. This element, therefore, must be sought for in whatever locality is selected for the patient. Purity of atmosphere is naturally to be looked for in high altitudes, but the number of inhabitants, and various other circumstances, may contaminate it to a very

marked extent. He had no doubt that the air of Colorado Springs and Davos was originally aseptic, but since they had become crowded with hotels and consumptives he found that this is no longer the case, and he believed that the benefit of residing at these places will grow less and less until, finally, they will be altogether abandoned as health resorts.

The second essential for a curative effect is the presence of conditions which should be conducive to outdoor life. It is perfect folly, he thought, for a phthisical patient to go to any resort and spend twenty hours out of the twenty-four shut up in a hotel or boarding-house. It is much better to remain at home, and if the patient is not well enough to take outdoor exercise he is not well enough to be sent to these places. This is why those in the first stage of phthisis are so often relieved; and the reason that those with cavities live is because they go to the health resort in a condition rendering them able to live out of doors. It is, however, not necessary to go to Colorado to find a pure air, and, besides, he did not believe that high altitude of itself is of the slightest practical importance. The great essential is purity of atmosphere; but as it is desirable that the patient should spend the most of his hours in the sun, Colorado Springs is preferable to Davos. As regards recovery in those places, if the patient does not remain in them for two or three years after all trouble has disappeared, the disease is almost certain to reappear within a few months. This is the great objection to high altitudes for consumptives, and he thought it possible to secure a perfectly pure air at a lower altitude, and that, too, much nearer home.

DR. R. P. LINCOLN said that he agreed with Dr. Wagner in believing that Colorado Springs is superior to Davos, and chief among its advantages over the latter is the large amount of sunshine obtainable there. With the sun there is dryness; so that we should naturally look for the best results there. On the 1st of January there was sun for only four hours and fifty-seven minutes at Davos; while at Colorado Springs, at the same date, there was sun for over nine hours, or nearly twice as long. There was also much less moisture at Colorado Springs than at Davos. As to the advisability of sending a patient with laryngeal phthisis to high altitudes, there had of late been a considerable change in professional opinion, and Dr. Solly, of Colorado Springs, had told him that he had known three cases to recover at that resort.

DR. BEVERLY ROBINSON, being unable to be present, sent a letter in which he stated that he could not say as much of any health resort in this country or Europe as of Colorado Springs. A residence there, he thought, is of special benefit in the first stage of phthisis, and patients could there breathe the aseptic air which can only be secured at high altitudes, while the remarkable prevalence of sunshine enabled them to pursue the outdoor life which is so important a desideratum.

DR. KRETSCHMAR said that Dr. Wagner was mistaken in supposing that Dr. Herman Weber was the first to call attention to the efficacy of high altitudes in phthisis, as the first one to do this was Dr. Bremer, who did so in a work entitled *The Curability of Phthisis Pulmonalis*, which was published in 1852. He thought that Dr. Loomis was mistaken in supposing that the aseptic character of the atmosphere necessarily becomes diminished in such health resorts as those referred to, as statistics show that before the year 1853, when Dr. Bremer established his famous hospital at Gerberstoff, there was actually a greater proportion of deaths from phthisis in that place than there has been since, although more than 13,000 patients have been treated in it. It was also a fact that none of the Sisters, who acted as nurses, or other attendants in the institution had contracted the disease.

As regards Davos, Dr. Wagner was mistaken in his statement that there are no accommodations to be had except in hotels. There is no dust, which is an objection to Colorado Springs, and the snow unquestionably helps to preserve the aseptic condition of the atmosphere. In the spring, when the snow melts, the patients very properly leave. The most serious drawback that Davos has as a resort for consumptives is the admixture of pleasure-seekers and invalids, since the latter are tempted to indulge in habits that are injurious to them.

THE PRESIDENT said that while certain places have a considerable immunity from phthisis, this immunity is only relative. While it may exist among the agricultural population, this would not be the case among those engaged in indoor employments. One element claimed as an important one in the climatic treatment of phthisis had not been referred to this evening, and that was the necessity of ozone in the atmosphere. This is supposed to be due to the sunlight, and it is found among mountains and evergreen forests, as well as near the sea and on the sea. As to the immunity of the nurses and other attendants in Dr. Bremer's hospital, he understood that in this institution it was claimed that the air in the rooms was completely changed five times every hour.

DR. LOOMIS referred to the beneficial effect of antiseptic emanations, and said that many places which are not naturally aseptic are rendered so by those emanations, especially those from evergreen forests.

DR. WAGNER said that he saw no reason why a patient should not be taken to Colorado Springs, even if he was not able to take exercise. The journey could now be made with comfort in a comparatively few hours, and when he arrived there he could sit or ride out in the open air, which was not the case at Davos.

CORRESPONDENCE.

OCULISTS AND OPTICIANS.

To the Editor of THE MEDICAL NEWS,

SIR: I desire to bring to the notice of the profession an evil which, if not corrected, will do incalculable harm to many honest and striving gentlemen. I refer to the indiscriminate recommendations given by members of the highest standing to men-venders of various wares, not in the profession, and who, if they have received degrees, are practising their calling wholly without the pale of support by physicians.

A few days since there came to Charleston two scientific opticians from Chicago, whose business is to examine the eye, *correct errors of refraction, prescribe*, and sell glasses. As to the mere selling of glasses there is nothing to be said. All books on ophthalmology contain chapters most carefully written on errors of refrac-

tion, as produced by hypermetropia, myopia, and astigmatism, explaining the true nature of these deformities, and giving the minutest directions as to the correction and treatment. Further still, the authors of these works enumerate and dwell upon the ills that may be caused by the above conditions, but at no portion of their writings do they refer such cases to the *optician* who shall prescribe the proper glass. The optician is a most important and necessary person, but he fills a prescription for glasses as does a druggist for medicines.

These "scientific opticians" not only make and sell glasses, but examine the eye in order to prescribe the proper glass. They come recommended to do this work by many of the *best physicians* of the country and *members* of the *American Medical Association*. Upon their arrival in a new place they immediately call upon the most *eminent general practitioners*, produce the ponderous tome of recommendations containing the signatures of well-known physicians of other cities, of Governors, Senators, ministers of the gospel, and other important functionaries. At the same time they are very particular to impress upon the gentlemen that they are not oculists, do not treat *diseases* of the eye and, therefore, cannot interfere with the oculist in any way. The general practitioner is for the nonce somewhat staggered by the array of prominent names, all thoughts of the oculists' work is forgotten, and he cannot resist the urgent appeal for his autograph, nor can he remember afterward the exact object for which it has been extracted, while he has been dazed as it were by gas. His begets others, and finally the names seem to jump to the book without much persuasion. In like manner ministers of the gospel—they always call upon them too—append their names, though some of them have never worn a glass and would recognize no difference between them. (One minister signed because his physician's name appeared on the list. The physician's was withdrawn but the minister's is still there.) Do they call upon the oculist? No, they do not, though every general practitioner has advised their doing so, it would be more proper for the oculist to call upon them. They next proceed to put a very taking advertisement in the daily papers, to which are appended the names of the eminent physicians, divines, etc.

This game was partially repeated in Charleston, the names of physicians secured aud all went as merrily as the marriage bell, but certain members of the County Medical Society thought the proceedings irregular and a special meeting was called, the matter investigated and by unanimous consent the names withdrawn, and thus the general practitioners of Charleston, who at first were doing an injustice to brother specialists, manfully acknowledged their error caused by a misapprehension.

No slur is cast upon these opticians or the quality of the glasses they supply, but my real object is to bring this matter before the profession for careful consideration. Specialists in various branches are recognized when they devote their time to the branch chosen, and it behooves the general practitioner to stand by his brother when in good repute. The glass is an orthopœdic instrument to the eye, but no one would think of sending a child with a club-foot to the instrument maker without first consulting the surgeon—yet the cases are parallel. No one can deny at this day that correcting errors of refraction and prescribing the necessary glass is a most important factor in the practice of the ophthalmologist.

Therefore, is it right and fair for gentlemen of prominence in the medical profession to give their names for *publication* for the benefit of non-professional men, when the practice of these men interferes with that of the specialist in good standing, who cannot even let it be known by a simple word on his door-plate that he practises in diseases of a special branch?

CHARLES W. KOLLOCK.

CHARLESTON, S. C., October 21, 1887.

NEWS ITEMS.

THE MANAGERS OF THE PENNSYLVANIA HOSPITAL have determined to create in the Department for the Insane positions for resident physicians; and they have authorized Dr. John B. Chapin, Physician-in-chief of the Hospitals for the Insane, to select and refer to the Board one physician for each department, to serve for so many months, as may be decided upon hereafter. This will give young physicians an opportunity to observe and study the various stages of mental diseases, which will be of great value to them in their professional life, in the early treatment of such patients coming under their care.

THE NEW YORK QUARANTINE.—The *Sanitary News* of October 15, 1887, publishes its investigation of the New York Quarantine as follows:

Summing up, with reference to the exclusion of cholera and smallpox, the quarantine plant and facilities of the port of New York are unrivalled, the printed regulations judicious, and with proper vigilance the service should suffice to prevent either of these diseases from obtaining access to the country through this avenue. But the entire system is hampered by a vicious financial policy which is, in effect, a farming-out of the service. At the other important ports the fees go directly to the municipality or State, and the chief executive officers are paid fixed salaries, and are provided with such employés as may be necessary to the proper and efficient conduct of the quarantine.

New York may exclude cholera under the present system, but more confidance would be reposed in the result if less were demanded of professional ability, personal integrity, and executive firmness in the health officer, and if the system were freed from influences which are most deprecated by those who, without prejudice, best understand them.

Cholera found its way through this port to the eastern portion of the country in 1849, and to the country generally in 1865. No attention is paid to the vaccinal status of immigrants unless the disease is actually on vessels. As a natural consequence, smallpox has repeatedly been introduced into the interior through this port.

THE WESTERN PENNSYLVANIA MEDICAL COLLEGE at Pittsburg, we are informed, has begun its second session, with a class of nearly 100 students.

THE CONGRESS OF HYGIENE adjourned October 2d to meet in London in 1891.

THE QUEEN has appointed William Scovell Savory, F.R.S., President of the Royal College of Surgeons of England, and Surgeon to St. Bartholomew's Hospital, to be Surgeon Extraordinary to Her Majesty, in the room of Richard Quain, deceased.

SIR WILLIAM GULL has suffered from a paralytic stroke, but of mild degree. The latest accounts of his condition are favorable. The paralysis is of the right side, and power has been regained in the upper extremity.

THE EMPEROR OF BRAZIL.—The *British Medical Journal* states that this active and intelligent monarch is a diabetic, in a somewhat advanced stage of the disease.

DR. KOCH, Director of the Hygienic Institute of the Berlin University, has received the Russian Order of St. Stanislaus of the 1st class.

A COMMITTEE TO INVESTIGATE HYPNOTISM.—Charcot, Brouardel, Marey, and others have been appointed a committee of the French Academy of Medicine to investigate results obtained by Luys under hypnotic conditions.

THE SURPLUS FUND FROM THE VIENNA CONGRESS OF HYGIENE is to be devoted to the establishment of an institution for perfecting hygienic manufacture in all its aspects.

LEGISLATION AGAINST COLOR BLINDNESS.—In a recent number *Science* had occasion to refer to the beneficent law now existing in several of the States, prohibiting the employment of color-blind persons on the railroads of those States, and instanced Massachusetts as the first one to enact such a law. At a meeting of the Brotherhood of Locomotive Engineers, just held in Boston, at which three thousand railroad-engineers were said to be present, one of the speakers who addressed the audience was received with great applause, because, as the chairman said in introducing him, "he secured the repeal of the obnoxious color-blind law,"—a questionable honor, if true; but, from the best information which we are able to obtain, the law still exists, although it has been modified in a manner which in no wise weakens, but, on the contrary, rather strengthens, its practical working. It is not to be wondered at that railroad employees object to a test of their qualifications which may result in the loss of their positions, but we imagine that any attempt to repeal the law would meet with the determined opposition of the entire travelling public. The single instance which occurred in Connecticut, where twenty-one railroad employees were found wholly color-blind, is sufficient proof of the necessity of such a law, and, instead of endeavoring to repeal existing laws, a strong and continuous effort should be made to extend their provisions to other States.—*Science*, September 30, 1887.

THE ITALIAN UNIVERSITIES.—During the last academic year 15,161 students were enrolled at Italian Universities, an increase of 722 over the preceding year. Naples was most frequented, 4083 students having attended there.

THE SUPPLY AND CONSUMPTION OF COCAINE.—DR. SQUIBB describes his manufacture and the consumption of cocaine as follows in the *Ephemeris* for October, 1887:

The one kind is a light green, thin, small leaf so very much broken up that hardly an unbroken leaf can be found. This contains a small proportion of stems and twigs, and quite a number of the yellow seed capsules. It has the appearance of having been beaten off of the trees, and certainly is not hand-picked.

The other kind is a very much larger, thicker leaf, much less broken, of a duller, darker green, or brownish green color, and less uniform in color. A considerable proportion of the leaves are unbroken, and stems and twigs are absent or rare. This variety looks as though it was hand-picked.

The first kind is called in the market Truxillo coca, and the lots now command as they arrive 23 to 25 cts. per pound. The second is called Huanuco coca, and about 30 to 32 cts. per pound is asked for it whether here or to arrive, an advance on both varieties of about 15 per cent. The localities which give the market names to these kinds are both in Peru, and considerably north of Lima,—the first near the coast, the other farther south and inland, but whether they come from these localities or not is uncertain, since names are sometimes used to conceal sources of supply. The present high price of Huanuco is based upon the customary report of a failure of a crop.

What has become of the fine quality of coca produced in Bolivia during the last six months is not known, none having reached either this market or Hamburg or London, so far as known to this writer. All received appears to have come from Peru.

The writer has used since his last report in these pages 238 bales of coca, 153 of the first variety and 85 of the second—total, 41,858 pounds. The highest price paid was 32 cts. and the lowest 15 cts., average 19 cts. —total cost, $7957.

This was all manufactured into hydrochlorate of cocaine and gave a total yield as sold and in stock of 922,917 grains or 131 pounds 13½ ounces.

This was made and sold within the ten months following the last report—that is from November, 1886, to August, 1887, both inclusive, an average of about 13¼ pounds per month, the demand pretty steadily increasing from about 6 pounds per month to about 18 pounds —both the lowest and the highest being, however, exceptional.

All was sold in three forms, namely, as hydrochlorate, as 4 per cent. solution of hydrochlorate, and a small quantity as uncombined alkaloid.

A large proportion of it was put up with much labor and expense in vials of 5 to 30 grains each, and the loss in putting up, so as to give full weight in each vial, exceeds 6 per cent. The loss in putting up eights, quarters, halves, and ounces was about 5 per cent., and for larger quantities was insignificant. The available yield as put up and sold is therefore below the real yield by the amount of these losses, and of all other incidental and accidental losses, but it is what the manufacturer must always base all his calculations upon.

The available yield from 41,858 pounds of coca being 922,917 grains, gives (922,917 ÷ 41,858 =) 22.05 grains of the salt to the pound of coca—all being calculated as hydrochlorate.

THE QUAIN BEQUEST. — MR. RICHARD QUAIN, F.R.C.S., F.R.S., has bequeathed almost the whole of his fortune, amounting to about £75,000, to University College, London, subject to certain annuities to family connections. The College will, we are informed, at once benefit to the extent of about £60,000, which sum is left to four trustees, to apply the annual income in "the promotion and encouragement in connection with University College, London, of general education in modern languages (especially the English language and composition in that language) and in natural science." The trustees, Lord Justice Fry, Sir William Jenner, Mr. George Brodrick (the Warden of Merton), and Sir George Young, are authorized to carry out the testator's wishes, "either by salaries or other payments to those who teach, or by endowing professorships, or by pecuniary aid to those who are being taught, as by endowing scholarships or fellowships, or in any other manner which the trustees may in their absolute discretion think proper," and they are requested to place themselves in communication with the Council of University College, with a view to preparing a scheme for carrying out the objects of the bequest. The testator desires that in any statement of the foregoing bequest the name of his brother, the late Sir John Richard Quain, shall be associated with his name. — *British Medical Journal*, October 8, 1887.

"STEEPLE CHASE" MEDICAL JOURNALISM.—A writer in the *Gazette Hebdomadaire* of Paris of October 7, 1887, in speaking of the liberality of an American journal which offered to its exchanges full reports of the recent Washington Congress, remarks that in the large number of recent Medical Congresses at Washington, Vienna, Pavia, Toulouse, Carlsruhe, Wiesbaden, and Heidelberg, it has preferred to publish reports carefully analyzed and criticised by special correspondents and competent reviewers rather than to accept the hasty reports of impromptu reporters, vieing with each other in what the writer styles "steeple chase journalism." For this reason the *Gazette* did not publish the report to which reference was made, deeming those selected of more scientific value.

THE MUTUAL RELATIONS OF PHYSICIAN AND PHARMACIST.—The *Pharmaceutical Era*, of Detroit, offers a prize of $50 for the best essay on this subject, under the following conditions: 1. Any one interested in the subject may compete. 2. The essay must not exceed 2000 words in length, and must be received previous to January 1, 1888. 3. The MSS. must be free from the author's name, address, or other marks of identification. 4. The author's name and address must be inclosed with the manuscript on a separate paper. 5. All the essays submitted in competition for the prize are to be the property of the *Pharmaceutical Era*, to be published or not, at the discretion of the editor, but names of authors will be suppressed if requested. 6. A Committee consisting of five representative men chosen from the medical and pharmaceutical professions, to whom the essays shall be submitted anonymously, shall award the prize, and the names of the Committee will be announced with their decision.—*New York Medical Journal*, October 22, 1887.

ATTEMPTED SUICIDE OF THE CHIEF OF THE VIENNA HOSPITAL. — DR. LÄNGER, *primararzt* of the great Vienna Hospital, after a somewhat unpleasant interview with Prof. Boehm, the newly appointed director of the hospital, took a large dose of morphia with the intention apparently of committing suicide. He was, however, promptly treated by the performance of tracheotomy and the mechanical inflation of the lungs through the opening. By this means his life has been saved. Dr. Länger, who is greatly respected, has been for some time past subject to melancholia.—*Lancet*, October 15, 1887.

THE THROAT HOSPITAL, Golden Square, London, has established a post-graduate course of instruction in diseases of the throat and nose, which promises to be well supported. Instruction in diagnosis and treatment is given by the physicians to the institution, Drs. Wolfenden, Bond, and Macdonald; and the practitioner is allowed the opportunity of handling the patients himself, under the guidance of members of the staff and their clinical assistants.

A UTERINE SUPPORT FOR HORSEWOMEN.—Finding that the women who ride in the "Wild West" Company now in London suffered severely at times from the jolting which they received, an English instrument maker has made a supporter consisting of a peculiarly shaped pad, with straps crossing the sacrum and meeting in front. Those who used them experienced marked comfort from them.

CALISTHENICS IN SCHOOLS.—An important movement in the London schools has for its object the physical training of the pupils, and at present 1200 teachers are receiving instruction in this department, and such teaching has been introduced into 250 schools.

THE INFLUENCE OF MENTAL IMPRESSIONS UPON WOUNDS.—PROFESSOR DELBOEUF of Liège is certainly the most versatile of living investigators, when one considers the great originality and suggestiveness of all the work he does. Ancient and modern languages, logic, general physics, and physiology, and especially experimental psychology, have received his attention by turns. His latest contribution is to therapeutics, and is a communication made on June 4 to the Belgian Academy, which will probably turn out to be of the greatest theoretical as well as practical importance.

We all are familiar with accounts of the wounds inflicted on themselves by African dervishes; but the statement which the narrators always make, that the wounds do not inflame, or may even be quite healed in twenty-four hours, probably often tends to discredit their whole description in the reader's mind. Delboeuf's observations now make these stories wholly plausible. It is well established that in certain hypnotic subjects a suggestion made during trance, that to a part of their body a cautery or a blister is applied, will produce, after due lapse of time, an actual vesication of the skin. The

hallucinatory feeling of inflammation produces in these persons a genuine inflammation. M. Delboeuf argued from this, that the feeling of pain, however useful in other respects, must itself be an inflammatory irritant, and went on to infer that the abolition of it from an actual wound ought to accelerate its healing. He immediately thought of some hypnotic subjects whom he had made anæsthetic, and in whom he had often admired the rapidity with which the marks of punctures and pinchings disappeared, and proceeded to more systematic experiments, which, so far as they go, seem to verify his hypothesis perfectly. On a young woman whom he could make insensible by suggestion, he marked two corresponding spots, one on each arm, and made on each an identical burn with the hot iron, announcing to the patient that the one on the right should not be felt. The suggestion took effect; and the next day, when the bandages were taken off, and the left arm presented a vesicled sore with an inflammatory area three centimetres in diameter, the right arm showed only a clean scorch of the skin of the exact size of the iron (eight millimetres diameter), without redness or inflammation. On another subject similar results were obtained with burns and blisters, the spots chosen being near together on the same arm or on the neck. The experiments are few in number, and ought to be multiplied; but the reader will immediately see the vista which they open. Many of the results of the "mind cure," and the strange fact, so long known, of opium controlling inflammations, are explained by M. Delboeuf's principle. So is the popular belief in "hardening" one's self by a little judicious indifference, and neglect of one's condition. Local pain is useful in leading us to protect the wounded part from mechanical abrasion—several of M. Delboeuf's experiments were inconclusive, because the subjects, being insensible at the seat of their injuries, allowed them to get scraped, etc.—but it has the drawback of exciting reflex changes of nutrition of an unfavorable kind. Anæsthetizing a wound prevents these reflex changes. M. Delboeuf, suggesting to a very sensitive subject that she should not feel a severe dental operation, was assured by the dentist that what he found most extraordinary in the whole performance was the absence of the salivary secretion which would usually have accompanied it.

It is to be hoped that others, with better facilities for surgical experimentation than a professor of classical literature like M. Delboeuf, will follow the example he has so happily set them.—*Science*, September 30, 1887.

POISONOUS CANDIES.—Prof. Erastus G. Smith, professor of chemistry at Beloit College, Wisconsin, has been analyzing samples of candy purchased at the shops in that city, and found them colored with cochineal for red, lead chromate (poison) for yellow and green, and aniline for orange. The hoarhound candy was highly colored with eosine. Purchasers of confection highly colored should be careful and refuse yellow and green, as chromate of lead is a deadly poison. Several cases of poisoning from this coloring on confection have occurred at Pittsburg.

THE JOHNS HOPKINS HOSPITAL.—It has been authoritatively announced that the Johns Hopkins Hospital will be opened for the reception and treatment of patients in the fall of 1888. This institution is in no wise affected by the failure of the B. & O. R. R. to pay its semi-annual dividend, as has been intimated. The funds of the hospital are not invested in B. & O. stock. —*Maryland Medical Journal*, October 22, 1887.

VON LANGENBECK.—The funeral of this distinguished surgeon was fully attended by the representatives of German science.

The feeling of profound and affectionate honor in which he was held is expressed by the *Berliner Wochenschrift* as follows: "We honored him, the gentle, kindly, genial master at whose feet we all had sat, whose incessant general labors we had beheld with admiring astonishment; we one and all honored and loved him as a kind father, and this feeling of affection and honor accompanies him to his grave, and will mourn over his perishing form."

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U.S. ARMY, FROM OCTOBER 18 TO OCTOBER 24, 1887.

WOLVERTON, W. D., *Major and Surgeon.*—Detailed as a member of the Army Retiring Board at Washington, District of Columbia, convened by *S. O. 78, A. G. O.*, April 5, 1887, vice Major C. C. Byrne, Surgeon, hereby relieved.—*S. O. 241, A. G. O.*, October 15, 1887.

GARDNER, EDWIN F., *Captain and Assistant Surgeon.*—Relieved from duty at Fort Reno, Indian Territory, and ordered for duty at Fort Lewis, Colorado.—*S. O. 242, A. G. O.*, October 15, 1887.

EWING, C. B., *First Lieutenant and Assistant Surgeon.*—Granted leave of absence for one month, on surgeon's certificate of disability.—*S. O. 112, Department of the Missouri*, October 18, 1887.

COCHRAN, JOHN J., *Captain and Assistant Surgeon.*—Now on duty at the Presidio of San Francisco, California, is assigned to temporary duty at Headquarters, Division of the Pacific, as assistant to the Medical Director of that division.—*S. O. 244, A. G. O.*, October 19, 1887.

JARVIS, NATHAN S., *First Lieutenant and Assistant Surgeon.*—Ordered for field duty in the Department of the Platte.—*S. O. 246, A. G. O.*, October 21, 1887.

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE U. S. NAVY FOR THE WEEK ENDING OCTOBER 22, 1887.

BEYER, H. G., *Passed Assistant Surgeon.*—Ordered to hold himself in readiness for orders to the "Trenton."

WHITE, S. S., *Assistant Surgeon.*—Ordered to hold himself in readiness for orders to the "Trenton."

STEPHENSON, F. B., *Passed Assistant Surgeon.*—Detached from the "Bache," and ordered to the Navy Yard, Boston.

STONE, E. P., *Assistant Surgeon.*—Detached from the "New Hampshire," and ordered to the "Bache."

STREET, T. H., *Surgeon.*—Detached from the "Patterson," and placed on waiting orders.

A Naval Medical Examining Board is now in session at the Naval Hospital, Philadelphia, Pa., for the purpose of examining candidates for admission to the Medical Corps of the Navy. Circulars of information can be obtained on application to the President of the Board. There are twelve vacancies in the list of Assistant Surgeons.

THE MEDICAL NEWS *will be pleased to receive early intelligence of local events of general medical interest, or of matters which it is desirable to bring to the notice of the profession.*

Local papers containing reports or news items should be marked.

Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

All communications relating to the editorial department of the NEWS *should be addressed to No. 1004 Walnut Street, Philadelphia.*

EXTRA ISSUE.

MEDICAL NEWS.

A WEEKLY MEDICAL JOURNAL.

Vol. LI. No. 18.
Whole No. 772.

SATURDAY, OCTOBER 29, 1887.

Per Annum, $5.00.
Per Copy, 10 Cents.

THE paramount importance to the public of preventing the importation of cholera into the United States calls for a special issue of THE MEDICAL NEWS, giving in full the report of the Commission appointed by the College of Physicians of Philadelphia, consisting of Drs. James C. Wilson, E. O. Shakespeare, and R. A. Cleemann, to investigate the condition of affairs in the Quarantine of New York.

It will be seen that the grave dangers which exist may render prompt action necessary with a view to establishing some national system of quarantine for the protection of the country.

REPORT OF THE COMMITTEE OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA

APPOINTED TO INVESTIGATE THE EFFICIENCY OF OUR QUARANTINE ARRANGEMENTS FOR THE EXCLUSION OF CHOLERA AND OTHER EPIDEMIC DISEASES.

TO THE PRESIDENT AND FELLOWS OF THE COLLEGE:

Your Committee appointed at the meeting of the College held October 5, 1887, to consider the present danger of the importation of cholera into this country, and to secure concerted action among the medical societies of the land in urging upon the State and National authorities the adoption of a uniform and efficient system of quarantine for all exposed ports, respectfully reports as follows:

The acceptance of the germ theory of infectious and contagious diseases, or the probability at least of its truth, places in a new light the management of quarantine for detention and disinfection of vessels and their passengers. Anterior to the promulgation of this doctrine the etiology of these diseases was so obscure, that it is not a matter of surprise that such diverse views existed on the subject of quarantine; as shown by its absolute abandonment in Great Britain, for instance, and, on the other hand, by its enforcement with unreasonable severity in the southern ports of Europe. There was no clear idea of that which was to be guarded against, and, therefore, no measures generally and unreservedly accepted as a means to the desired end.

In view of the nature of the work with which your Committee was charged, we found ourselves confronted with two questions of urgent importance:

I. What are the requirements of an efficient maritime quarantine against cholera?

II. To what extent do the existing arrangements at the ports of New York, Philadelphia, and Baltimore fulfil these requirements? [We speak of these ports only, because circumstances did not permit more extended personal investigations, and there is no reason to believe, from the published official descriptions, that the conditions of the other ports of entry upon our Atlantic and Gulf coasts are in any respect superior.]

I. In reply to the first of these questions, we cannot do better than quote at length from the editorial pages of a recent number of THE MEDICAL NEWS.[1]

"Measures of prevention, to give the greatest possible guarantee of success in extinguishing an incipient epidemic of cholera, should, in the first place, be based upon the most exact knowledge we possess of the cause, mode of attack, and manner of spread of the disease; and, in the second place, these measures should be intelligently, thoroughly, and rigidly enforced.

"What are the considerations involved in the first category? Probably nine-tenths of intelligent and experienced physicians all over the world, even including those of India, have for years admitted that there is most convincing proof that the active cause of the disease is a specific, material, living entity, of extremely minute size, endowed with the power of self-propagation, and of exceedingly rapid multiplication in enormous numbers; that among animals it naturally attacks man alone, assailing him only by way of the intestinal canal; that the evacuations from the bowels contain the active cause of the disease, and that when this agent in any manner—as through drinking water, milk, food, or the handling or washing of contaminated personal effects, etc.—reaches the intestines of another susceptible person, the disease may be thereby transmitted from the sick to the healthy; that the active agent exists in the dejecta of the lightest and most imperceptible no less than the severest and most deadly forms of the disease, and is known to be transportable from place to place through the movements of man and his personal effects.

"Proceeding from this basis, logical deduction and common experience alike demonstrate the absolute

[1] October 15, 1887, pages 455, 456, 457.

necessity and efficiency of such measures of prevention as the following:

"*a.* Speedy recognition and isolation of the sick; their proper treatment; absolute and rapid destruction of the infectious agent of the disease, not only in the dejecta and vomit, but also in clothing, bedding, and in or upon whatever else it finds a resting-place.

"*b.* The convalescents should remain isolated from the healthy so long as their stools possibly contain any of the infecting agent; before mingling again with the well they should be immersed in a disinfecting bath, and afterward be clothed from the skin outward with perfectly clean vestments, which cannot possibly contain any of the infectious material.

"*c.* The dead should be well wrapped in cloth thoroughly saturated in a solution of corrosive sublimate, 1 to 500, and without delay, cortège, or lengthy ceremonial, buried near the place of death in a deep grave, remote as possible from water which may, under any circumstances, be used for drinking, washing, culinary, or other domestic purposes. (Cremation, of course, is by far the safest way of disposing of cholera cadavers.)

"*d.* Those handling the sick or the dead should be careful to disinfect their hands and soiled clothing at once, and especially before touching articles of food, drinking, or culinary vessels.

"*e.* In the case of maritime quarantine, the well should be disembarked and placed under observation in quarters spacious enough to avoid crowding, and so well appointed and furnished that none will suffer real hardships.

"*f.* Once having reached the station, those under observation should be separated in groups of not more than twelve to twenty-four, and the various groups should, under no pretext, intermingle; the quarters for each group should afford stationary lavatories and water-closets in perfect working condition, adequate to the needs of the individuals constituting the group, and supplied with proper means of disinfection; there should be a bed raised above the floor, proper coverings, and a chair for each member of the group, each person being required to use only his own bed; there should be a common table of sufficient size to seat around it all the members of the group, who should be served their meals from a central kitchen, and with table furniture belonging to the station and cleaned by the common kitchen scullions.

"*g.* Drinking-water, free from possible contamination and of the best quality, should be distributed in the quarters of each group, as it is needed, and in such a manner that it is received in drinking-cups only; there should be no water-buckets or other large vessels in which handkerchiefs, small vestments, children's diapers, etc., can be washed by the members of any group.

"*h.* Immediately after being separated into groups in their respective quarters, every person under observation should be obliged to strip and get into a bath (a disinfecting one is preferable), and afterward be clothed with fresh, clean vestments from the skin outward. Every article of clothing previously worn should be taken away and properly disinfected.

"*i.* Then all of the personal effects should be at once removed to a separate building, washed—if possible—and thoroughly disinfected, or, if necessary, destroyed. After disinfection they should be temporarily returned to the members of groups, when occasion requires a further change of clothing.

"*k.* Under no circumstances whatever should washing of clothing by those under observation be permitted. All used clothing should be first thoroughly disinfected (by boiling, when possible), and then should be cleansed, the disinfection and washing being done by a sufficiently trained and absolutely reliable corps of employés supplied with adequate appliances.

"*l.* All of those under observation should be mustered in their own quarters and be subjected to a close medical inspection, *while on their feet*, at least twice every day, in order to discover and isolate as soon as possible new cases which may develop; and, of course, the clothing and bedding of these new cases should be treated without delay in the manner already mentioned. In the mean time a watch should be set over the water-closets, for the purpose of discovering cases of diarrhœa, and, when discovered, such cases should be temporarily separated from the rest; they should receive judicious medical attention at once, and precautions should be taken as if they were undoubted, but mild, cases of cholera.

"*m.* The quarters should be kept thoroughly clean, and every surface upon which infectious material could possibly be deposited, including the floors, should be washed with a strong disinfectant twice daily, and oftener when necessary; evacuations from the bowels should be passed into a strong disinfectant; the hopper of the closet should be then flushed, and finally drenched with a quantity of the same disinfectant.

"*n.* For the proper attention to the sick, there should be two or more competent and experienced physicians, assisted by a sufficient corps of intelligent and efficient nurses, with hours of duty so arranged that a physician with a sufficient number of nurses be in constant attendance in the wards of the hospital.

"*o.* For the prompt recognition and separation of new cases, their temporary medical attention, the proper treatment of discovered cases of diarrhœa or cholerine, and of other maladies, and the immediate correction of every insanitary practice or condition by constant, vigilant, and intelligent supervision, there should be at least two or more competent and experienced physicians, with hours of service so arranged that a physician is on duty night and day among those under observation; and he should have subject to his orders, at any and every moment, a sufficient and efficient corps of nurses and laborers to carry out properly and promptly his directions.

"*p.* In order to prevent the intermingling of the various groups, to enforce obedience and order, and to make it absolutely impossible for the quarantined and their personal effects to have any communication with the exterior, a well organized and sufficiently large police corps should patrol the borders of the stations and the buildings day and night.

"*q.* Any group among whom there has developed no new cases of cholera, or of choleraic diarrhœa, during the preceding eight or ten days, may be regarded as harmless, and allowed to leave quarantine after each one is finally immersed in a disinfecting bath, and reclothed with clean garments from the skin outward; the garments removed being destroyed, or thoroughly disinfected and cleansed as above indicated.

"As yet no reference has been made to the crew, ship, and cargo. What has been said of the treatment of those under observation, applies to every one of the ship's inhabitants. The observation, isolation, and cleansing of the crew and their effects, could safely be performed aboard ship if necessary. The ship should be thoroughly cleansed and disinfected, particular attention being given to the quarters of the emigrants and crew."

II. The second question is to what extent do the existing arrangements at the ports of New York, Philadelphia, and Baltimore fulfil these requirements?

Your Committee began its work by personally inspecting the quarantine stations at New York, Philadelphia, and Baltimore, arrangements having been previously made with the respective officials.

QUARANTINE STATION AT NEW YORK.

The quarantine establishment, visited October 8th, consists of a boarding station, which is the residence of the Health Officer, situated on Staten Island, four miles below the city, just within the Narrows at the entrance of the harbor, and in connection with New York city by telegraph and telephone; of an island of observation known as Hoffman Island, and of another, Swinburne Island, on which latter is erected a large hospital building. These islands are artificial, being made of foundations of rock, covered with sand; are situated in the lower bay about five miles below the boarding station, and two miles from the shore.

Hoffman Island is probably four acres in area, and rises some eight feet above the level of the sea. There are upon it two large brick buildings of two stories each, and a smaller building, the latter provided with cooking and heating apparatus for the larger buildings. One of the large buildings is furnished with water-closets in each story, and a lavatory in the upper. The rooms of this building are without furniture or bedsteads.

The water supply of this island is as follows: There is a cistern lined with brick, sunken beneath the surface of the sand near each of the large buildings, to collect rain-water from the roof, but at the time of our visit the sunken cisterns contained Croton water brought from the city of New York. The openings of these cisterns are provided with caps. In addition to these, there are two iron tanks of considerable dimensions in the large buildings in which the water-closets are located, and they are elevated some distance above the head. One of these tanks is intended for fresh water, to be used for bathing; the other for salt water to be used exclusively for flushing the water-closets. We found that owing to imperfection in the apparatus, several of the water-closets could not be flushed. The iron soil pipes into which these closets empty lead into the sea, each pipe having, as we were informed, a number of right angles in its course. In the corner of one of the rooms containing the water-closets there was a barrel nearly full of a solution of corrosive sublimate, one part to five hundred. This was employed for the purpose of drenching the pans of the closets *after* they have been used and flushed. We found the seats and the floors of these water-closets extremely wet.

The lavatory was a small room opposite the water-closets of the second story, containing two metallic bath-tubs, and a few stationary washstands, supplied with fresh water from the above-mentioned tank. We were informed that the bath-tubs had not been used during the present emergency. Immediately opposite the water-closets on the lower floor, and beneath the lavatory, was a small room devoted to the uses of a temporary hospital. This room contained four bedsteads with the corresponding bedding, but no other furniture, and was occupied by three recently developed cases of cholera.

In the other large building there were constructed in corners on the first floor two disinfecting rooms, fifteen feet by twenty, each having one or more windows communicating with the external air. These rooms appeared to be otherwise air-tight. The remainder of the first floor constituted a large wareroom for the storage of baggage. The disinfecting apparatus was supplemented by a large wooden vat, located in the boiler-house, for the purpose of subjecting clothing to the action of steam, but it was not placed in position until after the first week of detention.

This island was occupied by upward of five hundred men, women, and children, passengers from the cholera-infected steamship "Alesia," who at that date had been upon the island sixteen days. They roamed at will over the island and through the rooms of the large buildings, except the one in the second story of the building in which the disinfection had taken place, which was occupied by a number of people of the better class, who seemed to have exclusive use of it.

These two buildings were supplied with a limited number of mattresses and blankets, which were collected together in piles. We learned that this bedding had been supplied by the steamship company, but that none of it arrived until five days subsequent to the debarkation of the passengers upon the island. The immigrants were permitted access to a portion of their personal effects after disinfection. Many of the people were engaged in washing their clothing. This washing was done in vessels of various kinds and in the immediate vicinity of the mouths of the sunken cisterns. At the time of our visit the latter were uncovered, and the ground around them was saturated with the water which had been

used in washing, and a number of people were scouring with this wet sand, the pans and tins in which they received their food and drinking water. They drew the water from the cisterns by pails and vessels of various kinds. According to information received, these cisterns had not been cleaned out in a number of years.

By reason of want of facilities for perfect flushing of the water-closets, due to a defect in the pumps, a supplementary latrine had been extemporized by digging a long deep trench in the sand not more than fifty feet distant from one of the large buildings, and about thirty feet from one of the cisterns. Notwithstanding these arrangements, it was impossible on account of the inadequate police, to prevent the people from defecating in any convenient spot, and although they had been enjoined by the Health Officer against the use of the water in the sunken cisterns for drinking purposes, there were no means of enforcing this order, for access to the cisterns could indeed be had at all times. Drinking water brought from New York city was distributed upon application at a tank in one of the buildings. Food supplied by the agents of the steamship company, and, as we were informed, brought to the island in their vessels, was prepared in the kitchen and distributed in sufficient quantities. This food, which was well cooked, consisted of bread, soup, macaroni, potatoes, pork, and beans. The dishes were generally used in common by families or small groups, and the absence of knives and forks was noteworthy.

The police force of the island consisted of one watchman assisted by an improvised corps of twelve of the more intelligent of the immigrants, each of whom received for his services, one dollar per diem. In addition to the police force, there were three or four men in the employ of the Health Officer, whose duties were attention to the disinfection of bag age, to the water closets, to the cleanliness of the buildings, to the detection of new cases of cholera and their removal to the temporary hospital, and to other similar matters. Besides these there were a cook furnished by the agents of the steamship company, and an engineer.

There was no resident medical officer upon the island. The Health Officer, who is a physician, visited the island once, and sometimes twice daily, for the purpose of inspecting the immigrants, and for the general conduct and direction of affairs. At these times the new cases which had developed in the intervals of his visits, were transferred to the hospital on Swinburne Island.

At the time of the arrival of the "Alesia," there were on board eight cases of cholera, all of which were at once transferred to the hospital on Swinburne Island. The rest of the steerage passengers, apparently free from the disease, were, with their baggage, landed on Hoffman Island, the cabin passengers and crew remaining on board the vessel. The clothing of the cholera patients was taken back from the hospital on Swinburne Island to Hoffman Island to be disinfected, and the same course was afterward pursued with the clothing of those who, having been taken ill with the cholera, were from time to time removed to Swinburne Island. Up to the time of our visit, sixteen days after the arrival of the ship, twenty-seven new cases of cholera had developed, of which three were discovered on the day of our visit. Of the eight sick at the time of the removal of the passengers from the steamer, five died, and of the twenty-seven cases attacked upon the island, nine proved fatal, making a total mortality of fourteen. As soon as the immigrants were landed from the ship, their baggage was taken from them and stored on the lower floor of the large building in which disinfection was carried out. The process of disinfection was as follows: The articles were separated, shaken out and hung up in the disinfecting rooms, three pounds of sulphur being burned for every 1000 cubic feet of space. The disinfection of the baggage for the first time occupied five or six days, during which period the immigrants were denied access to their effects and continued to wear the clothing which they had on when they left the ship. The steam disinfecting apparatus before referred to, was not placed in position until toward the end of the first week. After that the baggage was for a second time disinfected, a double process being employed: the clothing being first subjected to the action of steam and then to the fumes of sulphur. After the first disinfection, those whose clothing was accessible, were permitted to change their garments, and were thereafter assigned to sleep in a separate room, but were not prevented from mingling with the other immigrants during the day. No effort was made otherwise to separate the passengers into isolated groups, nor indeed was there, in our opinion, any adequate provisions to prevent occasional communication by means of small boats, especially at night, between Hoffman Island and the shore. We were informed that boats had not infrequently been seen hovering around the island, and had occasionally been warned off.

Swinburne Island, on which the hospital is located, is somewhat larger than Hoffman Island. The hospital, consisting of several one-story wooden pavilions, and the grounds are in excellent condition. The water supply is contained in sunken cisterns for the storage of rain water, placed in the open spaces between the pavilions. The mouths of these cisterns are on a level with the ground, and are covered with stone slabs. There is an adequate heating and cooking apparatus, and there are also a small disinfecting room and an apothecary shop.

The *personnel* of this island consists of a resident superintendent, who is not a physician, and, at the time of our visit, two male nurses, one of whom at different times had attended medical lectures. There was also an intelligent Italian gentleman, without medical or nurse training, who had volunteered his services in the care of the sick. The wards of the hospital were supplied with a sufficient number of bedsteads and necessary bedding in good condition, and contained nine patients, including the three discovered on the day of our visit, and who had been brought over with us from Hoffman Island.

The dead were buried in shallow graves on a sand-spit at the extreme end of Staten Island, known as Seguin's Point.

QUARANTINE STATION AT PHILADELPHIA.

We visited this station, known as the Lazaretto, October 13th, and made the following observations: It is situated on the right bank of the Delaware River, eleven miles from the city, on Little Tinicum Island, a large tract devoted to farming, which is separated from the mainland by Darby Creek. It comprises twelve acres belonging to the city and six acres the property of the United States Government. There is a large main building of brick, substantially constructed at the beginning of this century. The central portion of this building is occupied by the steward, and contains offices of administration. There are two wings, two stories and an attic in height, one of which is used by the crew of the boarding steam-vessel, and the other is arranged for hospital purposes, with a capacity of forty beds; but it is at present unfurnished.

Some distance in the rear of this building is a two-story brick hospital, with a capacity of thirty beds, and containing a dispensary. The dead house is at the end of the building, but does not communicate with it. Near by is a wooden building ten feet by twelve feet, with a double wall and without windows, used for disinfecting by sulphur. There are at the station thirty-eight bedsteads, mattresses, and corresponding furnishing. Two small brick buildings near the river front accommodate the Lazaretto Physician and Quarantine Master, respectively.

The water-supply is obtained from old-fashioned wells with hand pumps. There are no large reservoirs for water, or large steam-boilers, or bath-tubs. There are several privies, but no water-closets. The station is connected with the city by telegraph. The Lazaretto physician, the Quarantine master, the male nurse, the telegraph operator, the crew of the boarding vessel, and the other attendants reside at the station during the quarantine season, which, as a rule, lasts from the first of June until the first of October. The steward resides at the station during the whole year. When the quarantine station is closed, the port-physician examines the vessels in the stream opposite the city.

On the government property is a large stone warehouse, about 120 feet by 40 feet, two stories and an attic in height, and also two brick buildings, in one of which resides the government inspector. There are no means of heating this warehouse, and its numerous windows are without sashes.

QUARANTINE STATION AT BALTIMORE.

This station, which is a new one, having been occupied only two years, is situated seven miles below Baltimore on the right bank of the Patapsco River, upon a point of the mainland jutting out into the stream and known as Little Hawkin's Point. The territory embraced in the quarantine station consists of fifteen acres, upon which are erected three frame dwellings, namely, a hospital of two stories with accommodations for about sixty patients, a dwelling for the medical officers, and another for the use of the crew of the boarding tug. The water is supplied by a spring about two hundred yards distant, being lifted by a windmill to a tank sufficiently high to permit of its distribution to the second story of the buildings.

The station has in store seventy-five tents to be used in emergency. No fence or wall separates the grounds from the adjacent land. At the time of our visit the hospital was unoccupied and locked up, so that we were unable to inspect the interior, but were informed that it was supplied with iron bedsteads and the necessary bedding. There is no special disinfecting apparatus at the station, nor any adequate means of disinfection; but there was pointed out to us a wing of the hospital designed for a kitchen, consisting of a small room with two windows and a door communicating with the building, in which, it was said, fumigation with sulphur could be practised. The water in front of the station is shoal, large vessels being obliged to anchor within two hundred yards of the main channel. The Quarantine Officer and his assistant, both of whom are physicians, besides the crew of the tug, a male nurse, and a gardener, reside at the station during the quarantine season, which usually ends October 31st.

We also visited the place four miles nearer Baltimore, which was formerly used as the quarantine station. It is now unoccupied and fallen into decay. It consists of a tract of land about four hundred acres in extent and several dilapidated buildings, including eight one story wooden barracks. This establishment is occasionally used as a pest-house for smallpox cases from the city of Baltimore. It is now unfurnished and untenantable.

CONCLUSIONS.

It is evident that the quarantine establishments at Philadelphia and at Baltimore fail in the most essen-

tial requisites of the necessary number of properly equipped buildings for the isolation and observation of a large number of immigrants.

In regard to the station at New York, the buildings are sufficiently large and numerous, and have adequate arrangements for heating and cooking, but they are not divided into a sufficient number of small compartments to permit the strict isolation of the immigrants into small groups. The water-closets were not sufficiently numerous, nor were they all in good working order; neither were there enough bath-tubs. The pumps, by which the supply of sea water used for flushing these closets was obtained, were out of order, and a period of two weeks elapsed before the necessary repairs could be made. It is also worthy of note that the soil-pipes only reached the sea by the already mentioned series of angular turns.

The necessary use of the supplementary latrine we have described; objectionable in construction and situation, as it was, it constituted a menace to the safety of the immigrants detained upon the island, among whom new cases were from day to day occurring. The dangers of infection were still further increased by the fact that the immigrants could not, under the existing state of affairs, be prevented from defecating at any convenient spot.

There was no provision for the general washing of clothing by the authorities. As a result of this defect, there arose the exceedingly dangerous practice of the washing of clothes at the cisterns by the immigrants themselves. The existence of underground cisterns at a station of this kind is, in itself, highly objectionable. All water reservoirs should be inaccessible to the immigrants, and should be placed above ground in such a manner as to avoid all danger of accidental contamination.

The disinfecting chambers were sufficiently capacious, but the existence of windows in them was a fault of construction which would seem decidedly to impair their efficiency.

The lack of bedsteads, chairs, tables, and proper eating utensils, added to the hardships of the immigrants and to the dangers of infection.

The location of the room used as a temporary hospital, namely, directly opposite one of the water-closets, and the fact that patients, known to have cholera and placed in this hospital, were allowed to use the water-closets in common with others, constituted a serious danger, and suggested the advisability of the use, for this purpose, of a separate building provided with its own water-closets and system of drainage.

Your Committee feels called upon to comment upon the absence of a resident medical officer at this station, and of an adequate force of watchmen, patrolmen, and attendants. As a consequence of these defects of organization, the well-recognized requirements of a quarantine of observation as pointed out in paragraphs *o*, *p*, and *q* above, could not possibly be fulfilled. The possibility of occasional clandestine communication between the detained immigrants and their friends by means of small boats, constituted a danger to the country, difficult to estimate, and against which, so far as we could learn, there were no certain precautions.

There was, in fact, no official supervision of the personal hygiene of the detained, no compulsory bathing or washing. The absence of towels in the lavatory and of paper in the water-closets, was notable. Soiled hands and filthy clothing indicated habits which favored the transmission of the cholera infection from person to person, particularly as the custom of several individuals eating from a common dish, without knives or forks, was frequently observed.

One of the results of the absence of bedsteads was the promiscuous heaping together of the mattresses and blankets during the day, in order to make room for washing the floors with disinfectant solutions; the bedding was thus doubtless used on successive nights by different persons, constituting a very probable means of transmission of the disease if they should become soiled by dejecta or vomit. Furthermore, as there was an insufficient number of matresses, two or more persons must have, in many instances, occupied one bed.

The hospital building on Swinburne Island appeared to be excellently adapted to its purposes. The use of underground cisterns for the storage of water is, however, here also objectionable. As there were no less than nine cases of cholera in the wards, at the time of our visit, some of whom were desperately ill, your Committee noted with surprise the absence of a resident physician, a fact that demands no further comment. And it was a reversal of modern ideas to find male nurses in charge of female patients.

Your Committee was at a loss to understand why the clothing of patients was sent back to Hoffman Island to be disinfected, as there is a disinfecting chamber in connection with the hospital. We were informed that the convalescents were, as soon as they were strong enough to be about, returned to Hoffman Island, without having been previously bathed and disinfected.

The recent arrival of the "Britannia," another steamship of the same line, with a large number of Italian immigrants from the infected port of Naples, among whom, if press reports are true, cholera evidently made its appearance during the voyage, its existence being either not recognized by the ship's surgeon, or else concealed by the deliberate falsification of the ship's sanitary record, has already,

in the opinion of your Committee, seriously increased the present danger of the ultimate introduction of cholera into the country through the port of New York. It would seem that if the importation of immigrants directly from a European port notoriously infected, is not to be temporarily prohibited as a necessity of public safety, or if the treatment of these immigrants, after their arrival at the New York quarantine station, is not to be immediately and radically improved, our protection against an epidemic at the present time must rest mainly upon the fortunate circumstance of the near approach of a season in which the disease does not usually spread. The continuance of cholera among the passengers of the "Alesia" so long after their removal to the station of observation, in itself demonstrates the inefficiency of the measures which have been adopted and enforced for its extinguishment there. Although we have not yet heard of the development of the disease anywhere on the main-land, nevertheless, in view of the almost uncontrollable tendency of cholera to spread at times, and of the original insufficiency and the present faulty constitution of the police force on Hoffman Island, we feel impelled to believe that the immunity up to the present time has been owing to singular good fortune, rather than to good management.

Moreover, in our opinion, it is necessary that the personal effects of Italian immigrants directly from the infected ports shall be, in all cases, thoroughly disinfected before they are permitted to land, whether the word cholera makes its appearance in the ship's log and the sanitary record of the voyage or not. It is a well-known fact, established by numerous instances, that even when immigrants from an infected locality have themselves remained free from disease during the voyage, their baggage, packed before starting, has been the conveyer of the infection to their point of destination. The passengers of the steamship "Independente," most of whom were shipped directly from the infected port of Palermo, although it is stated that during the voyage no case of cholera developed, come under this category. The recent action of the Surgeon-General of the Marine Hospital Service, and the alarm of the health authorities of the cities of Chicago and St. Louis, seem, therefore, not without some just foundation.

It should be stated, however, that we have learned through the medium of the public press that an attempt has been made to remedy a few of the defects above pointed out. What has been done would appear, however, to be in the direction of improvement in minor matters, rather than in such radical changes as would insure the country against the dangers to which it is exposed.

In the conduct of its personal investigations, and in the preparation of its report, your Committee has dealt solely with patent facts and plain truths which would meet the eyes and occur to the minds of any unprejudiced and competent men charged with a similar duty. To lay the simple statement of these facts before physicians who are in possession of modern knowledge concerning the nature, cause, mode of production, and means of prevention of such a virulently infectious disease as Asiatic cholera, is to prove beyond rational dispute that the present quarantine, as a safeguard at the ports under consideration, is dangerously and essentially imperfect.

It is natural, after having made our comments on the defects of the quarantine stations we have described, that we should endeavor to point out their causes and probable remedy. There is one cause so prominent, that we may dwell on that alone. It is the great expense. Were it not for the question of money, there would have been physicians constantly in attendance at the New York station, and, consequently, better management and discipline would have been maintained, while at Philadelphia and Baltimore there would have been adequate establishments provided for the isolation and observation of large bodies of immigrants.

Municipalities and States are wont to scrutinize every dollar of their money appropriations, bringing their expenses down to the closest living limit. Quarantine in this country being, as a rule, enforced mainly against yellow fever and smallpox, a mistaken economy has caused no provision to be made for the more perfect establishments absolutely required for protection against cholera.

Philadelphia, Baltimore, and other ports of a more limited commerce, are unable to spend as much on their stations as is New York, with its large revenues from that source, yet an inefficient quarantine at any station exposes the whole country to the dangers of the importation of disease. But it is manifestly unfair that a single municipality or State should defray the expense of protecting the whole public.

How, then, can we have equally complete stations all along the coast? We believe that this can be effected by putting quarantine into the hands of the National Government. We know that there are legislative difficulties in the way; that quarantine partaking of the nature of police regulation, its exercise, it may be claimed, belongs to the local authorities. Yet, even if it be conceded to be a police regulation, its scope is not local, but extends over the whole country, and it would seem, in justice, that it should be exercised and paid for by the whole country. Objection is sometimes made to quarantine on the ground that commerce is unduly interfered with, or even destroyed. A modern quarantine, however, does not necessarily involve the detention of cargo, nor prolonged detention of

the passengers. It is now known that in the case of cholera the disease germs infest the persons, clothing, and surroundings of the passengers and crew, while the cargo, except in some rare instances, is free from infection. Non-infected vessels require no detention whatever, the health officer examining them in transit.

Not to speak of the danger which threatens the whole country, the exposure, suffering, and loss of life that have occurred among the passengers of the "Alesia" detained at the quarantine of observation on Hoffman Island, have been due to the imperfect manner in which the measures of quarantine have been there carried out. Had the details of isolation and disinfection set forth in the earlier pages of this report been immediately and effectually put in force, the passengers who were not already infected at the time of leaving the ship, and this includes the whole number with very few exceptions, might have been released from quarantine in eight days, without the slightest risk to the country.

The thanks of the Committee are due to the quarantine authorities of New York, Philadelphia, and Baltimore for courtesies extended to it in conducting the investigations upon which this report is based.

Your Committee offers the following resolution:

Resolved, that in order to secure concerted action among the medical societies of the United States looking to the early adoption of a uniform and efficient quarantine of all exposed ports, the Committee be continued and be authorized to issue an address to medical societies of the country, and seek their coöperation.

All of which is respectfully submitted.

J. C. WILSON, *Chairman.*
E. O. SHAKESPEARE,
R. A. CLEEMANN.

PHILADELPHIA, October 28, 1887.

CHOLERA AND QUARANTINE.

THE report of the Special Committee appointed by the College of Physicians of Philadelphia to investigate our present sanitary defences, was presented to the College last evening, and it clearly shows that the quarantine arrangements of our coast are greatly insufficient for the accomplishment of the only object of their existence.

The establishments at Philadelphia and Baltimore are entirely inadequate for the proper treatment of such an emergency as has been present for the past month in the port of New York. While the plant of the New York quarantine establishment is altogether far superior to that of any other port in this country, yet in many respects it lacks the essential facilities for the handling of large numbers of immigrants under observation, in such a thorough manner as to prevent the spread of infectious diseases among them while under detention.

Whilst many of the shortcomings at New York are the natural consequence of parsimonious appropriations by the State or municipal authorities, yet the administration of affairs at the quarantine station appears, also, to be seriously at fault.

The absence of medical officers, and of an efficient corps of experienced attendants at Hoffman and Swinburne Islands, is, in our opinion, inexcusable.

The neglect to separate and isolate infected groups has had doubtless considerable to do with the continuance of cholera among the detained immigrants, and a failure to enforce habits of personal cleanliness, together with the insufficient supply of eating utensils, has greatly increased the means of disseminating the cholera poison.

The practice of promiscuous washing of clothing around the mouths of water cisterns, which no doubt occasionally supplied some of the people with drinking water, was, in the light of experience, exceedingly liable to spread the disease.

The carelessness with which the detained immigrants have been guarded is surprising. During the first weeks the number of the force was absurdly insufficient to prevent communication with the shore, and although it has been increased, yet the fact that all but one of the policemen were chosen from among the immigrants under detention, seems in itself to constitute a source of danger.

The present uneasiness created by the landing and transportation inland of the immigrants recently brought by the "Independente" from Palermo, after only twenty-four hours' detention at the New York Quarantine, is not without cause. Experience has shown that it is dangerous to place any great faith upon the statements and records of the ship's officers concerning its sanitary condition. Moreover, it is quite possible that the baggage could become infected in the localities whence these people migrated, and retain the infective agent while packed away and unused during the voyage, to become active in the production of the disease at any time subsequently when handled or washed.

It is, therefore, necessary to treat the baggage of all incoming immigrants from infected ports as if the disease had actually made its appearance on the ship. The passengers should be given a disinfecting bath and clothed in clean garments and then kept under observation until the expiration of the period of incubation of the disease—say, five days. It is needless to add that these precautions should be observed in the case of every ship arriving from an infected locality.

STILLÉ ON CHOLERA.
By Alfred Stillé, M.D., LL.D. 12mo., 163 pages, with chart. Cloth, $1.25.